Base Load Power Hub (BLPH)

APPENDIX P – Ballast Sequence for BLPH

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1 INTRODUCTION

1.1 PROJECT OVERVIEW

Crosswind, a Shell and Eneco joint venture, was awarded the tender to develop the offshore Hollandse Kust Noord (HKN) wind farm, located 18.5km off the coast of Netherlands near the town of Egmond aan Zee. The consortium plans to have HKN operational in 2023 with an installed capacity of 759MW generating at least 3.3TWh per year. This is sufficient renewable power to supply more than 1 million Dutch households with green electricity.

Offshore wind farms produce intermittent electricity and balancing these dips and peaks and integrating this electricity into the national energy system requires new technologies. For this reason, the offshore wind farm will include several new technologies that could be implemented at full-scale in the future. The new technologies being explored include a floating solar park, a short-duration battery storage as well as long-term storage via green hydrogen produced by water electrolysis and subsequently consumed in a fuel cell. The combination of these individual measures, herein referred to as the Base Load Power Hub (BLPH) will ensure a continuous power supply regardless of the wind situation.

1.1.1 Project Location

The Hollandse Kust Noord (HKN) wind farm is located 18.5km off the coast of the Netherlands near the town of Egmond aan Zee.

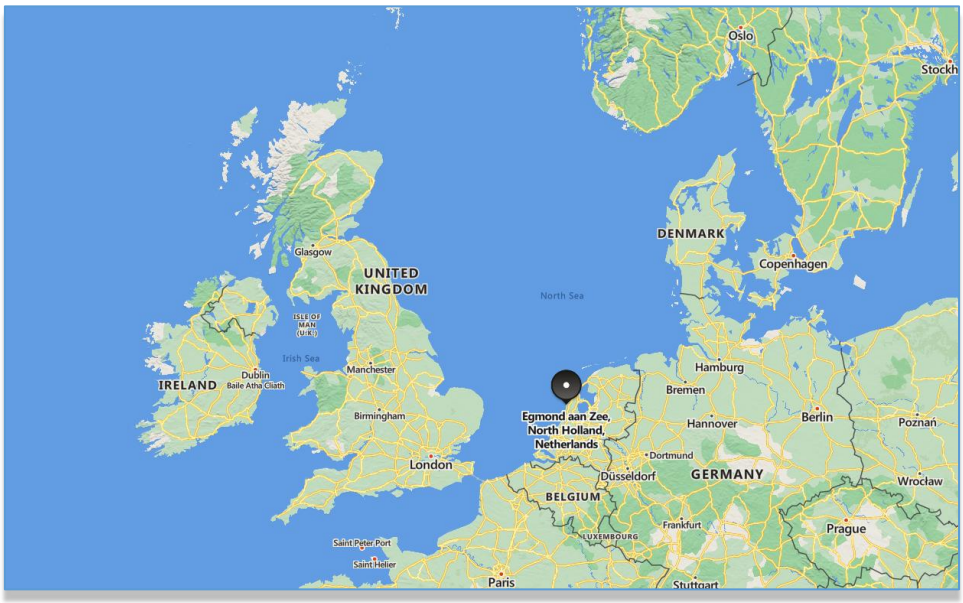


Figure 1.1 HOLLANDSE KUST NOORD WIND PARK Location Map

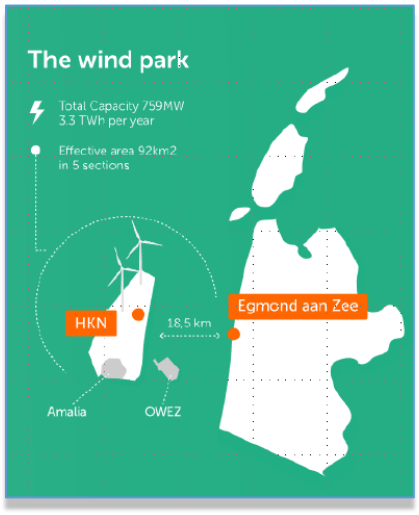


Figure 1.2 - Wind Park Details

The wind farm consist of No. 69 x 11.5MW wind turbine generators each to be installed on a dedicated monopile structure. A 70th monopile located on coordinates E 590719.1, N 5841602.3 is reserved for installing the platform accommodating the BLPH. The monopile structure was designed and installed by Van Oord Offshore Wind (VooW) and therefore not part of the BLPH scope.

1.1.2 Project Concept

All components included in the BLPH will be integrated onshore on a topsides and installed in an offshore location within the boundaries of the HKN wind farm. At its simplest, the BLPH will store energy during periods of high electricity generation from renewable sources (a wind turbine generator and the floating solar PV farm) and release it during periods of low generation. In practice. It is expected that the energy stored will supplement generation from renewable sources to ensure that at least 1.0MW of power is exported to the electrical grid regardless of wind/solar availability.

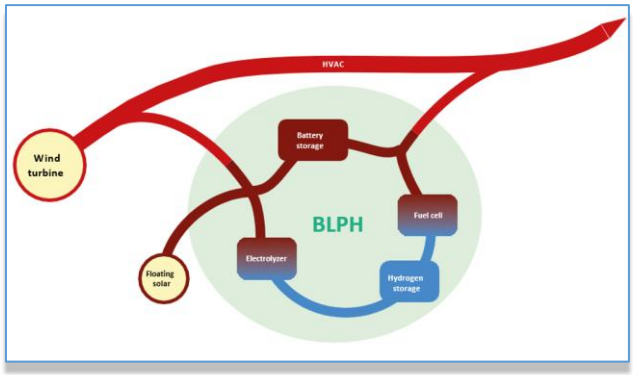


Figure 1.3 – BLPH Concept

Electricity in the BLPH will be stored in the form of electrons in a battery energy storage system (BESS) as well as converted into green hydrogen via water electrolysis. When the power output from the connecting wind turbine drops to below 1 MWe, the BLPH will return its stored energy to supplement the remaining power output. This will be by discharging the BESS, while stored hydrogen will be converted back into electricity using a fuel cell to extend the discharge duration.

The purpose of the BLPH is to function as a testbed for the integration of energy storage technologies with renewable generation. It is expected that equipment installed on the BLPH will operate as Normally Unmanned Installation for at least two (2) years with no or minimal maintenance and it will have its own independent control room with the ability to communicate with Crosswind's control room.

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2 SCOPE

This report presents the results of the load-out simulation of the BLPH topside on board of VERVECE barge.

The selected cargo barge has the following main dimensions:

- Barge Name: Vervece
- LOA: 91.44 m
- Breadth: 27.43 m
- Depth: 6.1 m
- Frame Spacing: 2.286 m

The quay elevation above the mean sea level is 1.75 m.

The operation is planned to be performed on 19th of July 2025; the tide variation shall therefore be -30cm / +30cm.

Normal operation is planned in the rising tide phase.

Load out operation is classified type 2, given the possibility for water level differences due to environmental effects, as per section 10.2.1 of Ref./2/.

The analysis is performed in accordance with the design requirements, criteria and parameters reported in the Structural Design Premises, Ref./4/.

The International System of units (SI) is used in all engineering assessments and calculations.

The hull of the barge and the ballast compartments were modelled using Moses language, Ref./16/.

The Multi-Operational Structural Engineering Simulator (MOSES) offshore engineering software package, developed by Ultramarine Inc., was used to simulate intact stability, and assess the longitudinal strength of the transportation barge during load-out operations.

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3 REFERENCES

3.1 CODES AND STANDARDS

Doc. No.	Description
/1/ API RP 2A-WSD	Recommended practice for planning, designing and constructing fixed offshore platforms – Working stress design – 22nd edition – 2014
/2/ DNV-ST-N001	DNV - Marine operation and marine warranty - 2023

3.2 PROJECT DOCUMENTS

Doc. No.	Description
/3/ 123A90-DDL-MD-RE-01006	Monthly Weight Report
/4/ 123A90-DDL-ST-SP-90017	Structural Design Basis
/5/ 123A90-DDL-ST-SP-90018	Structural Material Specification for Topside & TP
/6/ 123A90-DDL-ST-SP-90118	Structural Material Specification for Flange & Bolts
/7/ 123A90-DDL-ST-TN-90119	Evaluating ISO and DNV approaches
/8/ 123A90-DDL-TI-SP-99014	Specification for TP, Topside and Caissons Transportation and Installation
/9/ 123A90-DDL-ST-RE-90001	Topside loadout analysis
/10/ 123A90-DDL-TI-RE-99001	Topside Gr&SF report
/11/ 123A90-DDL-TI-DD-99021	Topside – Grillage Assembly
/12/ 123A90-DDL-TI-DD-99023	Topside – Grillage – Plan and Section
/13/ 123A90-DDL-TI-RE-99012	Topside – Yard Checklist
/14/ 123A90-DDL-TI-RE-99013	Topside – internal seafastening report
/15/	Vervece Stability booklet

3.3 SOFTWARE

Doc. No.	Description
/16/ MOSES	Hydrostatic and Hydrodynamic Analysis Software for Offshore Installation and Platform Design– BENTLEY Inc, v.12

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4 TRANSPORTATION ARRANGMENT

The BLPH will be supported by spacers installed directly below the lower deck main beams. It is assumed to be located on the barge deck as follows:

- with respect to the barge longitudinal axis an offset of 1142mm.
- Row 1 is located 50861 mm from the barge stern.

The following figure shows the arrangement of the BLPH module on the barge.

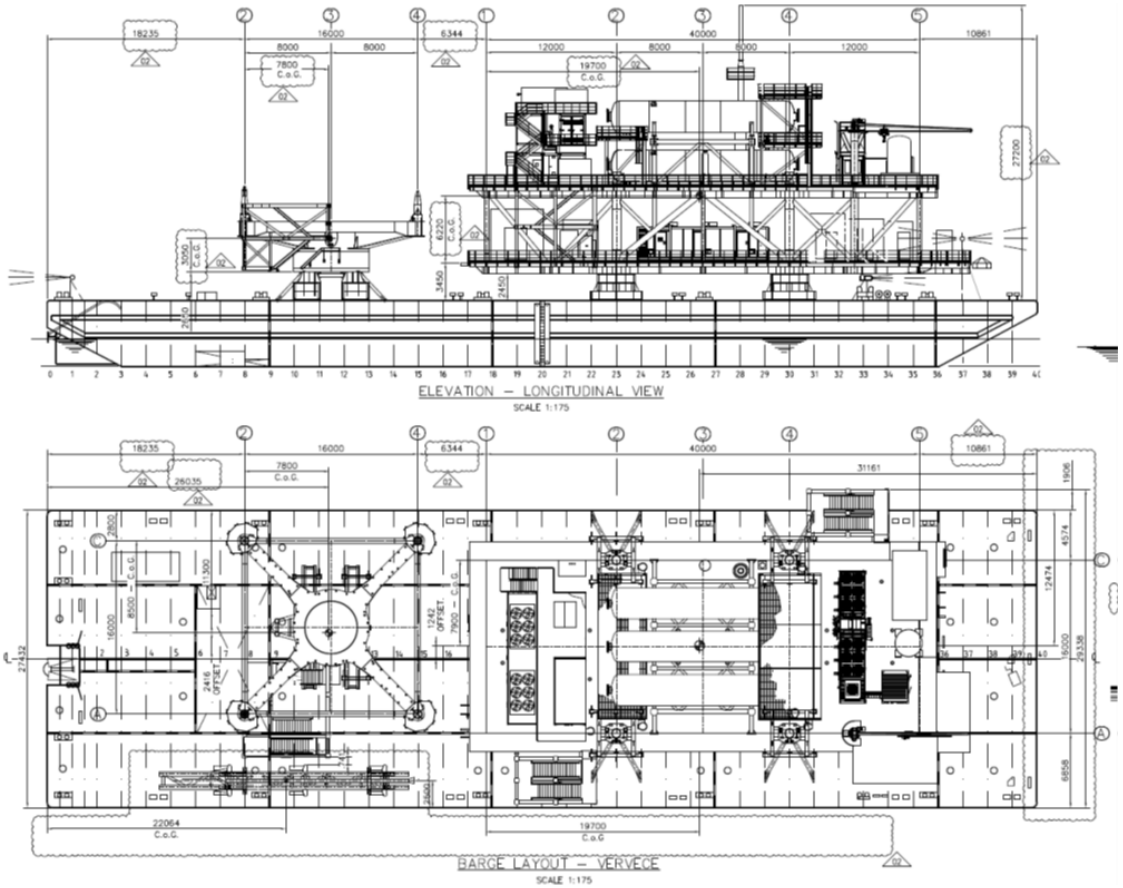


Figure 4.1 – Barge layout

Once the topside is loaded-out onto the barge by means of the hydraulic trailers SPMT, it is lowered and it is supported on the lower grillage beams.

The transportation restraint scheme is finally completed with the seafastenings.

Considering the depth of the lower grillage (including shim plates mm), the bottom ends of deck legs are located at elevation +2.45 m above the barge deck.

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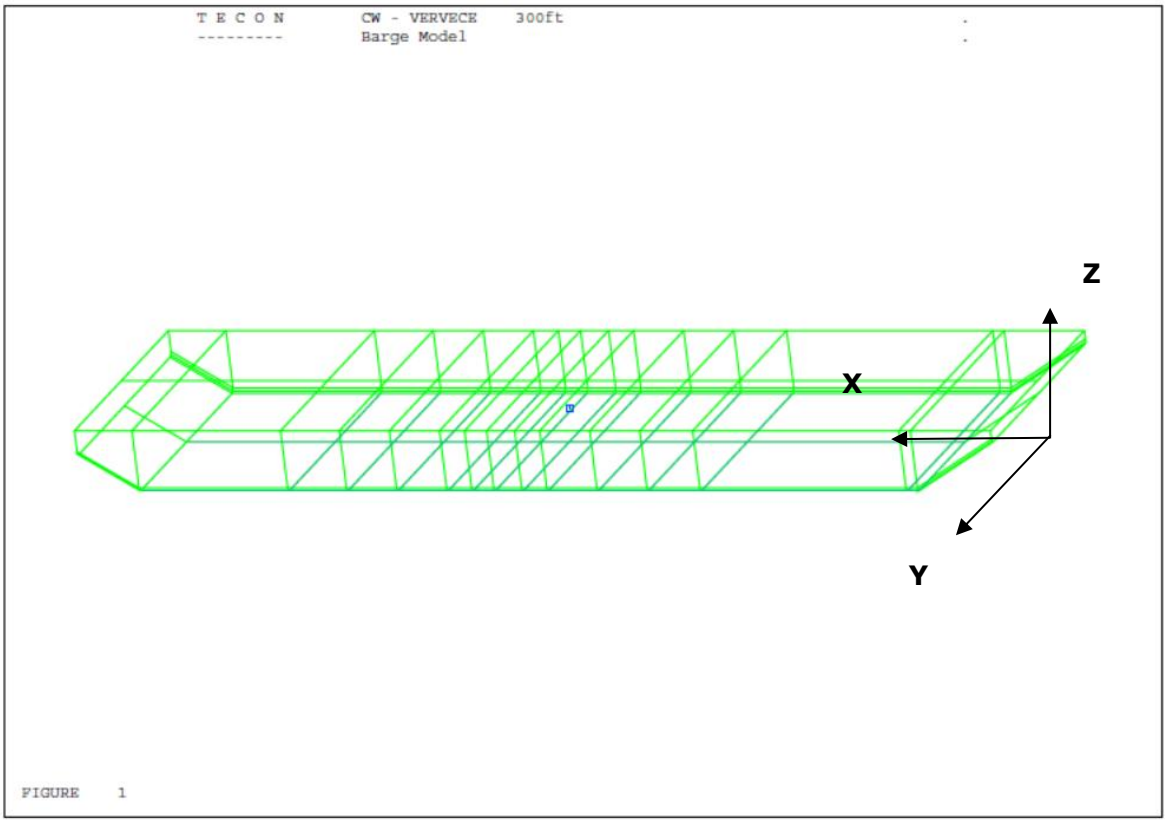
5 CARGO BARGE

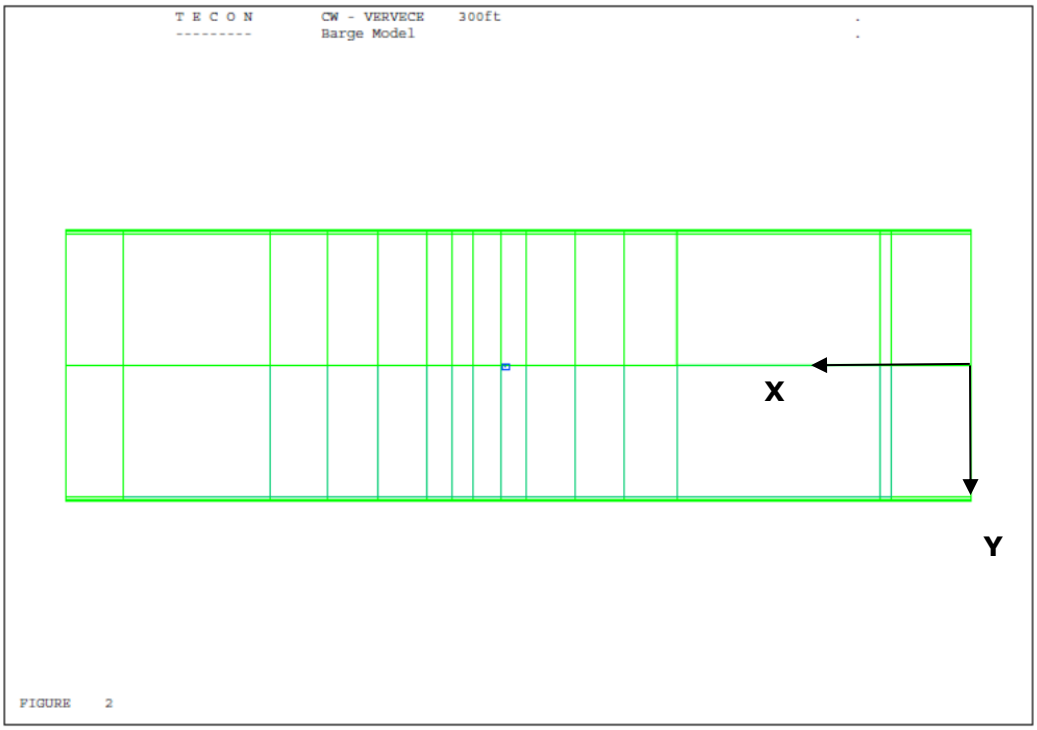
5.1 MOSES MODEL

VERVECE model was set out in MOSES language based on the hull drawings and on the tanks capacities and weight distribution included in the barge documents.

The standard Moses reference system has the origin at the bow of the barge, on the centreline and at keel elevation, the X axis positive from bow to stern, the Y axis positive to starboard and the Z axis positive upwards.

The Moses barge hull model is shown in the following figures:





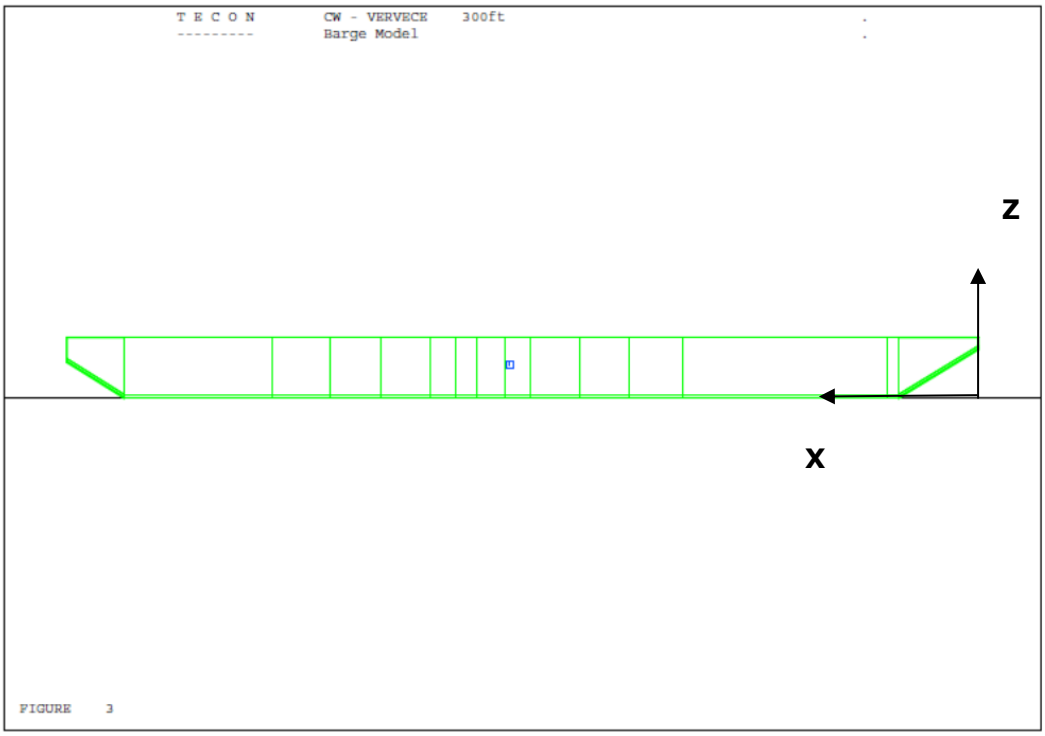


Figure 5.1 – Barge MOSES model and ref. system

The Barge hydrostatic properties are summarised in the following tables.

The density used for sea water is 1.025 t/m3.

```
**********************************************************************************************************
*                                          ***  MOSES   ***                                              *
*                                          ----------------                    25 March, 2025            *
*          T E C O N       CW - VERVECE    300ft                               .                         *
*          ---------       Hydrostatic Curves                                  .                         *
*                                                                                                        *
**********************************************************************************************************

                              +++ H Y D R O S T A T I C   P R O P E R T I E S +++
                              ==================================================

                    Process = DEFAULT: Units = Degrees, Meters, M-Tons, and MPa Unless Stated

                                        Results are in the Body System

                                              For Body VERVECE
```

/--- Condition ---			//- Displac-/	/-- Center Of Buoyancy --/			/ W.P. /	/C. Flotation /		/---- Metacentric Heights ----/			
Draft	Trim	Roll	M-Tons	---X---	---Y---	---Z---	Area	---X---	---Y---	-KMT-	-KML-	-BMT-	-BML-
0.10	0.00	0.00	211.04	46.85	0.00	0.05	2081.674	46.85	0.00	619.45	5128.82	619.40	5128.77
0.20	0.00	0.00	425.67	46.85	-0.00	0.10	2101.925	46.85	-0.00	313.63	2588.77	313.53	2588.67
0.30	0.00	0.00	641.89	46.85	0.00	0.15	2116.956	46.84	0.00	210.82	1743.33	210.67	1743.18
0.40	0.00	0.00	859.65	46.85	0.00	0.20	2132.015	46.84	0.00	159.57	1321.77	159.37	1321.57
0.50	0.00	0.00	1078.63	46.84	-0.00	0.25	2140.752	46.84	0.00	127.79	1066.52	127.54	1066.27
0.60	0.00	0.00	1298.50	46.84	0.00	0.30	2149.490	46.84	0.00	106.68	896.91	106.37	896.61
0.70	0.00	0.00	1519.27	46.84	-0.00	0.35	2158.227	46.83	0.00	91.64	776.06	91.29	775.70
0.80	0.00	0.00	1740.94	46.84	0.00	0.40	2166.965	46.83	0.00	80.39	685.59	79.99	685.19
0.90	0.00	0.00	1963.50	46.84	-0.00	0.45	2175.702	46.83	0.00	71.66	615.36	71.20	614.90
1.00	0.00	0.00	2186.96	46.84	0.00	0.50	2184.439	46.83	0.00	64.69	559.26	64.19	558.75
1.10	0.00	0.00	2411.31	46.84	-0.00	0.56	2193.177	46.83	0.00	59.00	513.42	58.45	512.87
1.20	0.00	0.00	2636.56	46.84	-0.00	0.61	2201.914	46.82	0.00	54.27	475.29	53.67	474.68
1.30	0.00	0.00	2862.70	46.84	-0.00	0.66	2210.652	46.82	0.00	50.28	443.07	49.62	442.41
1.40	0.00	0.00	3089.74	46.83	0.00	0.71	2219.389	46.82	0.00	46.87	415.49	46.16	414.78
1.50	0.00	0.00	3317.68	46.83	0.00	0.76	2228.126	46.82	0.00	43.92	391.62	43.16	390.86
1.60	0.00	0.00	3546.51	46.83	-0.00	0.81	2236.864	46.81	0.00	41.34	370.77	40.53	369.96
1.70	0.00	0.00	3776.23	46.83	-0.00	0.86	2245.601	46.81	0.00	39.07	352.40	38.21	351.54
1.80	0.00	0.00	4006.86	46.83	-0.00	0.91	2254.339	46.81	0.00	37.07	336.10	36.15	335.19
1.90	0.00	0.00	4238.37	46.83	-0.00	0.96	2263.076	46.81	0.00	35.28	321.54	34.31	320.58
2.00	0.00	0.00	4470.79	46.83	0.00	1.01	2271.813	46.81	0.00	33.67	308.46	32.65	307.45
2.10	0.00	0.00	4704.09	46.83	0.00	1.07	2280.551	46.80	0.00	32.22	296.65	31.15	295.58
2.20	0.00	0.00	4938.30	46.83	0.00	1.12	2289.288	46.80	0.00	30.91	285.93	29.79	284.81
2.30	0.00	0.00	5173.40	46.82	0.00	1.17	2298.026	46.80	0.00	29.71	276.17	28.54	275.00
2.40	0.00	0.00	5409.40	46.82	-0.00	1.22	2306.763	46.80	0.00	28.62	267.23	27.40	266.01
2.50	0.00	0.00	5646.29	46.82	-0.00	1.27	2315.500	46.79	0.00	27.63	259.03	26.35	257.76
2.60	0.00	0.00	5884.07	46.82	0.00	1.32	2324.238	46.79	0.00	26.71	251.48	25.38	250.15
2.70	0.00	0.00	6122.75	46.82	-0.00	1.38	2332.975	46.79	0.00	25.86	244.50	24.49	243.12
2.80	0.00	0.00	6362.33	46.82	0.00	1.43	2341.713	46.79	0.00	25.08	238.03	23.65	236.60
2.90	0.00	0.00	6602.80	46.82	0.00	1.48	2350.450	46.79	0.00	24.35	232.03	22.88	230.55
3.00	0.00	0.00	6844.17	46.82	0.00	1.53	2359.188	46.78	0.00	23.68	226.44	22.15	224.91
3.10	0.00	0.00	7086.44	46.81	0.00	1.58	2367.925	46.78	0.00	23.06	221.22	21.47	219.64
3.20	0.00	0.00	7329.60	46.81	0.00	1.63	2376.663	46.78	-0.00	22.47	216.35	20.84	214.71
3.30	0.00	0.00	7573.65	46.81	0.00	1.69	2385.400	46.78	0.00	21.93	211.78	20.24	210.10
3.40	0.00	0.00	7818.61	46.81	-0.00	1.74	2394.138	46.77	0.00	21.42	207.50	19.68	205.76
3.50	0.00	0.00	8064.45	46.81	0.00	1.79	2402.875	46.77	-0.00	20.94	203.47	19.15	201.68
3.60	0.00	0.00	8311.19	46.81	0.00	1.84	2411.444	46.77	-0.00	20.49	199.63	18.65	197.79
3.70	0.00	0.00	8558.60	46.81	0.00	1.90	2415.958	46.69	-0.00	20.04	195.05	18.14	193.15
3.80	0.00	0.00	8806.47	46.80	0.00	1.95	2420.419	46.61	-0.00	19.61	190.71	17.66	188.76
3.90	0.00	0.00	9054.78	46.80	0.00	2.00	2424.867	46.52	-0.00	19.21	186.60	17.21	184.60
4.00	0.00	0.00	9303.56	46.79	0.00	2.05	2429.302	46.44	-0.00	18.83	182.70	16.78	180.65
4.10	0.00	0.00	9552.79	46.78	-0.00	2.10	2433.730	46.36	0.00	18.48	179.00	16.37	176.90
4.20	0.00	0.00	9802.47	46.77	-0.00	2.16	2438.159	46.28	0.00	18.14	175.49	15.99	173.34
4.30	0.00	0.00	10052.61	46.75	0.00	2.21	2442.588	46.20	-0.00	17.82	172.15	15.62	169.95
4.40	0.00	0.00	10303.21	46.74	0.00	2.26	2447.017	46.11	0.00	17.52	168.98	15.26	166.72
4.50	0.00	0.00	10554.25	46.72	-0.00	2.31	2451.446	46.03	-0.00	17.24	165.95	14.93	163.64
4.60	0.00	0.00	10805.76	46.70	-0.00	2.36	2455.874	45.95	-0.00	16.97	163.06	14.61	160.69
4.70	0.00	0.00	11057.71	46.69	-0.00	2.42	2460.303	45.87	-0.00	16.72	160.30	14.30	157.88
4.80	0.00	0.00	11310.12	46.67	0.00	2.47	2464.732	45.79	-0.00	16.47	157.66	14.01	155.20
4.90	0.00	0.00	11562.96	46.65	0.00	2.52	2468.126	45.72	-0.00	16.24	154.95	13.72	152.43
5.00	0.00	0.00	11815.95	46.63	-0.00	2.57	2468.198	45.72	-0.00	16.00	151.75	13.43	149.18
5.10	0.00	0.00	12068.95	46.61	0.00	2.62	2468.228	45.72	-0.00	15.77	148.68	13.15	146.06
5.20	0.00	0.00	12321.94	46.59	-0.00	2.68	2468.245	45.72	0.00	15.55	145.74	12.88	143.06
5.30	0.00	0.00	12574.93	46.57	-0.00	2.73	2468.249	45.72	-0.00	15.34	142.91	12.62	140.18
5.40	0.00	0.00	12827.93	46.56	0.00	2.78	2468.249	45.72	-0.00	15.15	140.20	12.37	137.42
5.50	0.00	0.00	13080.93	46.54	0.00	2.83	2468.249	45.72	-0.00	14.96	137.59	12.13	134.76
5.60	0.00	0.00	13333.92	46.52	-0.00	2.88	2468.249	45.72	-0.00	14.78	135.09	11.90	132.20
5.70	0.00	0.00	13586.92	46.51	-0.00	2.93	2468.249	45.72	-0.00	14.61	132.68	11.68	129.74
5.80	0.00	0.00	13839.91	46.49	-0.00	2.99	2468.249	45.72	-0.00	14.45	130.36	11.46	127.37

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5.90	0.00	0.00	14092.91	46.48	0.00	3.04	2468.249	45.72	-0.00	14.30	128.12	11.26	125.08
6.00	0.00	0.00	14345.91	46.47	-0.00	3.09	2468.249	45.72	-0.00	14.15	125.97	11.06	122.88

+++ H Y D R O S T A T I C C O E F F I C I E N T S +++

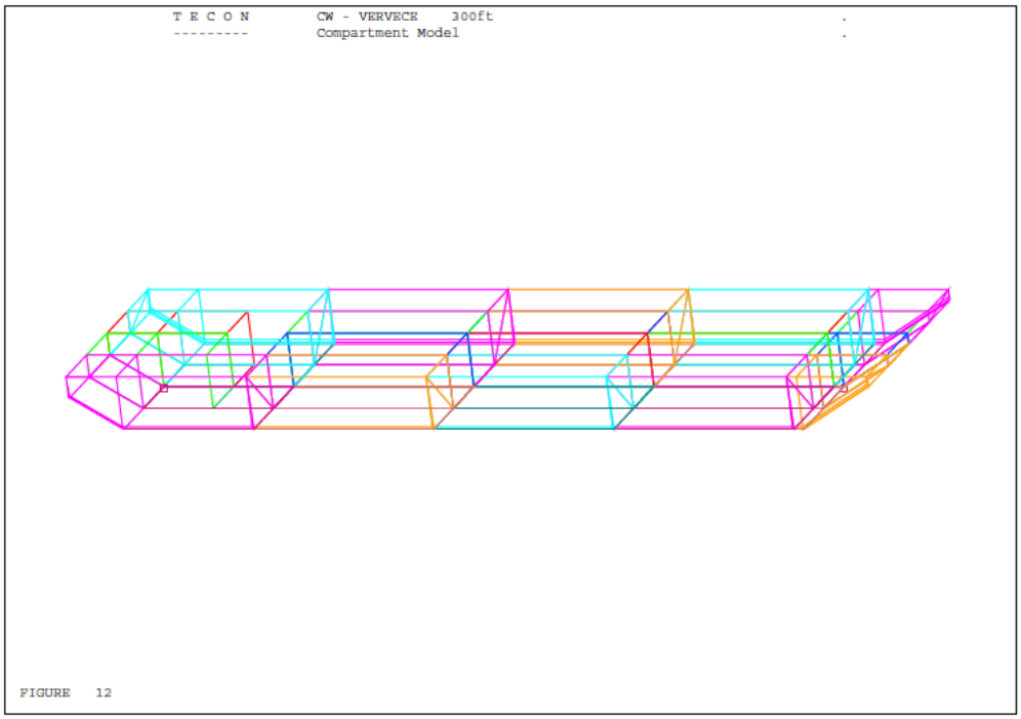
Process = DEFAULT: Units = Degrees, Meters, M-Tons, and MPa Unless Stated

Results are in the Body System

For Body VERVECE

/--- Condition ---/			Displacement	Wetted Surface	Load To Change Draft 1 MM	/--- For KG = KB ----/ Moment To Change .01 Deg	
Draft	Trim	Roll				--- Heel ---	--- Trim ---
0.10	0.00	0.00	211.04	2120.1	2.13	22.81	188.91
0.20	0.00	0.00	425.67	2151.4	2.15	23.29	192.32
0.30	0.00	0.00	641.89	2178.7	2.17	23.60	195.29
0.40	0.00	0.00	859.65	2206.1	2.19	23.91	198.28
0.50	0.00	0.00	1078.63	2232.2	2.19	24.01	200.73
0.60	0.00	0.00	1298.50	2258.4	2.20	24.11	203.20
0.70	0.00	0.00	1519.27	2284.7	2.21	24.21	205.69
0.80	0.00	0.00	1740.94	2311.0	2.22	24.30	208.20
0.90	0.00	0.00	1963.50	2337.4	2.23	24.40	210.72
1.00	0.00	0.00	2186.96	2363.9	2.24	24.50	213.27
1.10	0.00	0.00	2411.31	2390.4	2.25	24.60	215.84
1.20	0.00	0.00	2636.56	2417.0	2.26	24.70	218.43
1.30	0.00	0.00	2862.70	2443.6	2.27	24.79	221.04
1.40	0.00	0.00	3089.74	2470.3	2.27	24.89	223.67
1.50	0.00	0.00	3317.68	2497.1	2.28	24.99	226.33
1.60	0.00	0.00	3546.51	2524.0	2.29	25.09	229.00
1.70	0.00	0.00	3776.23	2550.9	2.30	25.19	231.69
1.80	0.00	0.00	4006.86	2577.9	2.31	25.28	234.41
1.90	0.00	0.00	4238.37	2604.9	2.32	25.38	237.15
2.00	0.00	0.00	4470.79	2632.0	2.33	25.48	239.90
2.10	0.00	0.00	4704.09	2659.2	2.34	25.58	242.68
2.20	0.00	0.00	4938.30	2686.4	2.35	25.68	245.48
2.30	0.00	0.00	5173.40	2713.7	2.36	25.77	248.30
2.40	0.00	0.00	5409.40	2741.1	2.36	25.87	251.15
2.50	0.00	0.00	5646.29	2768.5	2.37	25.97	254.01
2.60	0.00	0.00	5884.07	2796.0	2.38	26.07	256.90
2.70	0.00	0.00	6122.75	2823.6	2.39	26.17	259.80
2.80	0.00	0.00	6362.33	2851.2	2.40	26.26	262.73
2.90	0.00	0.00	6602.80	2878.9	2.41	26.36	265.69
3.00	0.00	0.00	6844.17	2906.7	2.42	26.46	268.66
3.10	0.00	0.00	7086.44	2934.5	2.43	26.56	271.66
3.20	0.00	0.00	7329.60	2962.4	2.44	26.66	274.67
3.30	0.00	0.00	7573.65	2990.3	2.45	26.75	277.71
3.40	0.00	0.00	7818.61	3018.4	2.45	26.85	280.78
3.50	0.00	0.00	8064.45	3046.4	2.46	26.95	283.86
3.60	0.00	0.00	8311.19	3074.5	2.47	27.05	286.91
3.70	0.00	0.00	8558.60	3100.3	2.48	27.10	288.53
3.80	0.00	0.00	8806.47	3126.2	2.48	27.15	290.13
3.90	0.00	0.00	9054.78	3152.1	2.49	27.20	291.73
4.00	0.00	0.00	9303.56	3178.0	2.49	27.25	293.33
4.10	0.00	0.00	9552.79	3204.0	2.49	27.30	294.94
4.20	0.00	0.00	9802.47	3230.0	2.50	27.35	296.55
4.30	0.00	0.00	10052.61	3256.0	2.50	27.40	298.17
4.40	0.00	0.00	10303.21	3282.0	2.51	27.45	299.80
4.50	0.00	0.00	10554.25	3308.1	2.51	27.50	301.43
4.60	0.00	0.00	10805.76	3334.3	2.52	27.55	303.06
4.70	0.00	0.00	11057.71	3360.4	2.52	27.60	304.71
4.80	0.00	0.00	11310.12	3386.6	2.53	27.65	306.35
4.90	0.00	0.00	11562.96	3412.3	2.53	27.69	307.62
5.00	0.00	0.00	11815.95	3436.0	2.53	27.69	307.65
5.10	0.00	0.00	12068.95	3459.8	2.53	27.69	307.66
5.20	0.00	0.00	12321.94	3483.6	2.53	27.69	307.67
5.30	0.00	0.00	12574.93	3507.3	2.53	27.69	307.67
5.40	0.00	0.00	12827.93	3531.1	2.53	27.69	307.67
5.50	0.00	0.00	13080.93	3554.9	2.53	27.69	307.67
5.60	0.00	0.00	13333.92	3578.7	2.53	27.69	307.67
5.70	0.00	0.00	13586.92	3602.4	2.53	27.69	307.67
5.80	0.00	0.00	13839.91	3626.2	2.53	27.69	307.67
5.90	0.00	0.00	14092.91	3650.0	2.53	27.69	307.67
6.00	0.00	0.00	14345.91	3673.8	2.53	27.69	307.67

The modelled compartment codes are shown in the following figure



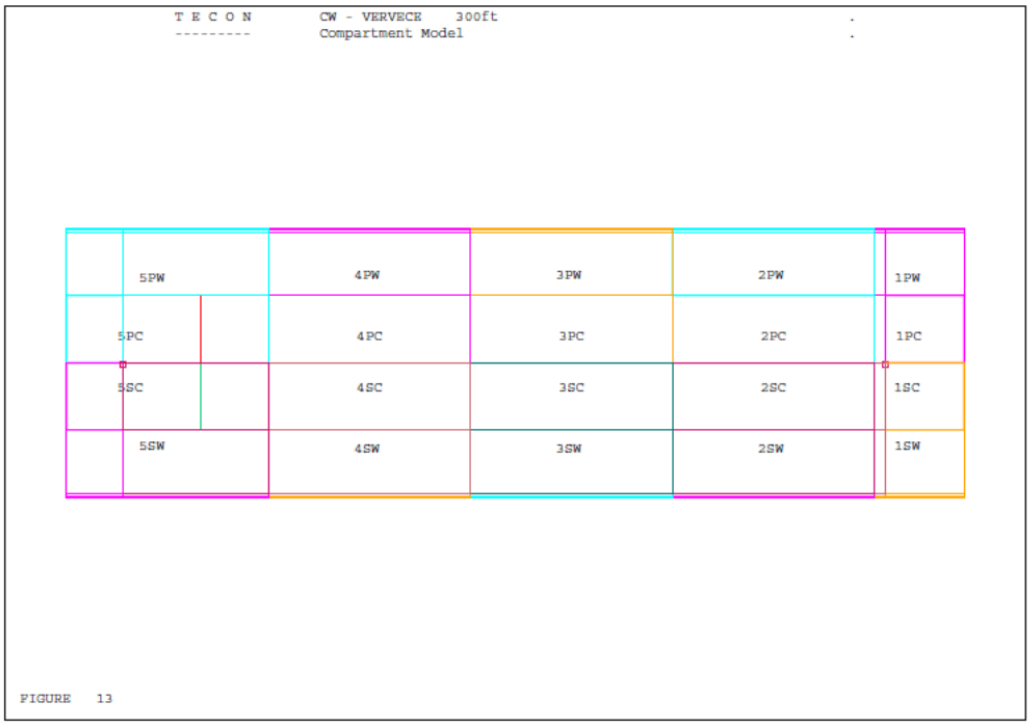


Figure 5.2 – Barge Compartments

The capacity plan for ballast compartments is presented in the Moses output.

The density used for ballast water is 1.025 t/m3 (same of sea water).

```
*****************************************************************************************************************
*                                          ***  MOSES   ***                                                     *
*          T E C O N       CW - VERVECE    300ft                                    .                          *
*          ---------       Capacity Plan                                            .                          *
*****************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ======================================================================
                Process = DEFAULT: Units = Degrees, Meters, M-Tons, and MPa Unless Stated

                                  Results Are Reported In Body System

                       Draft =     0.00 Roll Angle =     0.00 Pitch Angle =     0.00

                                     Wet Radii Of Gyration About CG

                              K-X =     7.95 K-Y =    24.53 K-Z =    25.56

                                        /-- Center of Gravity ---/  Sounding   % Full
                       Name      Weight    ---X---  ---Y---  ---Z---  -------- --------

                       ----------------  Part VERVECE    ------------
                       LOAD_GRO   1832.80    47.02     0.00     3.52
                       --- Contents ---
                       1PC         234.61     5.60    -3.43     3.81     6.10   100.00
                       1PW         234.98     5.60   -10.28     3.82     6.10   100.00
                       1SC         235.12     5.60     3.43     3.81     6.10   100.00
                       1SW         234.98     5.60    10.28     3.82     6.10   100.00
                       2PC         873.69    19.43    -3.43     3.05     6.10   100.00
                       2PW         873.63    19.43   -10.28     3.05     6.10   100.00
                       2SC         873.69    19.43     3.43     3.05     6.10   100.00
                       2SW         873.63    19.43    10.28     3.05     6.10   100.00
                       3PC         873.69    40.01    -3.43     3.05     6.10   100.00
                       3PW         873.63    40.00   -10.28     3.05     6.10   100.00
                       3SC         873.69    40.01     3.43     3.05     6.10   100.00
                       3SW         873.63    40.01    10.28     3.05     6.10   100.00
                       4PC         873.69    60.58    -3.43     3.05     6.10   100.00
                       4PW         873.63    60.58   -10.28     3.05     6.10   100.00
                       4SC         873.69    60.58     3.43     3.05     6.10   100.00
                       4SW         873.63    60.58    10.28     3.05     6.10   100.00
                       5PC         492.02    83.89    -3.43     3.31     6.10   100.00
                       5PW         793.58    80.40   -10.28     3.22     6.10   100.00
                       5SC         484.29    83.89     3.43     3.31     6.10   100.00
                       5SW         793.58    80.40    10.28     3.22     6.10   100.00
                       ========  ========  =======  =======  =======
                       Total     15819.89    45.53    -0.00     3.18
                       Buoyancy      0.00     0.00     0.00     0.00

                            +++ C O M P A R T M E N T   P R O P E R T I E S +++
                            ===================================================
                                      Results Are Reported In Body System

                          Process = DEFAULT: Units = Degrees, Meters, M-Tons, and MPa Unless Stated

                                    Fill   Specific /--- Ballast ---/ /------ % Full --------/ Sounding
                            Name    Type    Gravity  Maximum  Current   Max.    Min.    Curr.  --------

                          1PC     CORRECT     1.0250    234.6    234.6  100.00    0.00  100.00     6.096
                          1PW     CORRECT     1.0250    235.0    235.0  100.00    0.00  100.00     6.096
                          1SC     CORRECT     1.0250    235.1    235.1  100.00    0.00  100.00     6.096
                          1SW     CORRECT     1.0250    235.0    235.0  100.00    0.00  100.00     6.096
                          2PC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          2PW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          2SC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          2SW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          3PC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          3PW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          3SC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          3SW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          4PC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          4PW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          4SC     CORRECT     1.0250    873.7    873.7  100.00    0.00  100.00     6.096
                          4SW     CORRECT     1.0250    873.6    873.6  100.00    0.00  100.00     6.096
                          5PC     CORRECT     1.0250    492.0    492.0  100.00    0.00  100.00     6.096
                          5PW     CORRECT     1.0250    793.6    793.6  100.00    0.00  100.00     6.096
                          5SC     CORRECT     1.0250    484.3    484.3  100.00    0.00  100.00     6.096
                          5SW     CORRECT     1.0250    793.6    793.6  100.00    0.00  100.00     6.096
```

5.2 LIGHTSHIP

As indicated in the barge Stability booklet the barge has the following properties:

- Lightweight = 1833 t
- LCG = 44.42 m
- VCG = 3.524 m
- TCG = 0.0 m

5.3 DOWNFLOODING POINTS

Down flooding points have been modelled at barge edges and at deck elevation+600mm, Ref./15/.

Following FloodingPoints are included in the calculations:

No.	Type	Fr.AP(M)	Fr.CL(M)	Ab/BASE(M)	Description
1	3	90.000	-13.000	6.700	Ventilator, Tk. 1 PW
2	3	90.000	13.000	6.700	Ventilator, Tk. 1 SW
3	3	1.000	-13.000	6.700	Ventilator, Tk. 5 PW
4	3	1.000	13.000	6.700	Ventilator, TK. 5 SW

5.4 ALLOWABLE LONG. BENDING MOMENT AND SHEAR IN STILL WATER

Section 13 of Ref./15/, indicates the following values of bending moment and shear in still water:

	Max B.M.	W
Hogging	26700 tm	3.24 m^3
Sagging	26130 tm	3.24 m^3
Max shear midship	6150 ton	

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6 LOAD-OUT SIMULATION

The load-out was fully simulated using the software MOSES.

The transportation layout of BLPH on Vervece barge is shown below.

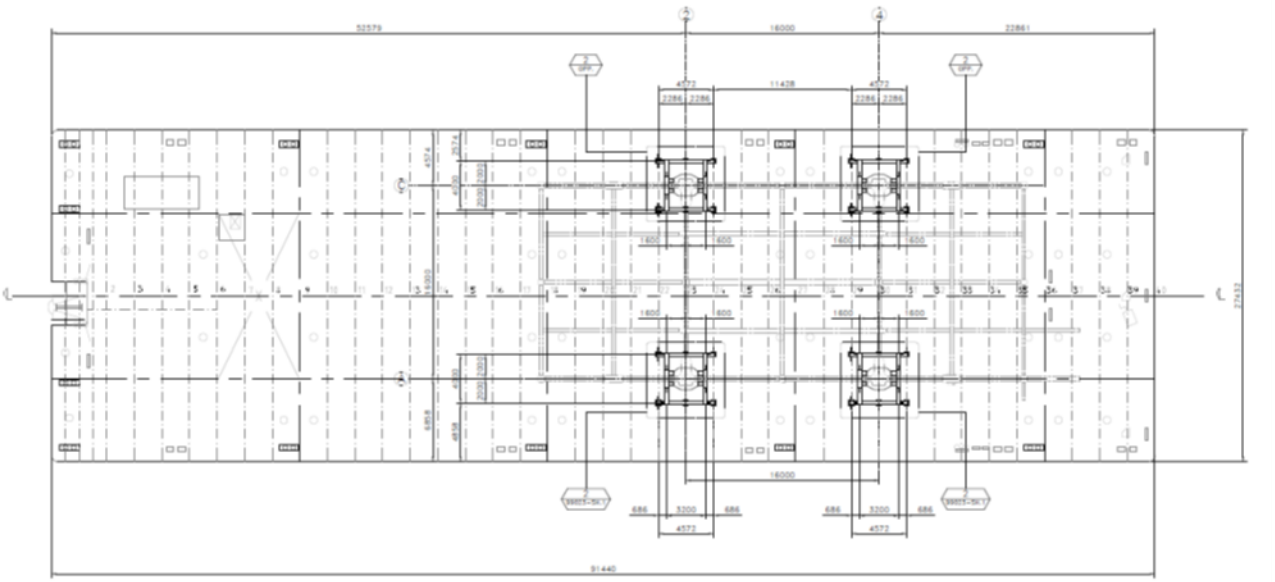


Figure 6.1 – Grillage arrangement – Top view

The operation was divided in 19 steps plus the initial step 0 that shows the initial ballast pattern. In recognition of the physical limitations of the ballasting system, the following criteria have been applied in the load-out analyses:

- At 3% volume ballast tanks are considered empty.
- at 98% volume ballast tanks are considered full.

The load-out simulation was performed according to the following premises:

Load-out date: 19th of July 2025

Starting hour: 7:00 AM

Trailer speed: 9 to 20 m / hour

6.1 LOAD DESCRIPTION

The SPMT drawing, Ref. Appendix H, shows all data for the load-out on board of the cargo barge. Drawing is included in Appendix 2 for easy reference.

The following figures show parts of the above-mentioned drawing.

CoG position is taken from ref. /3/,. according to the last issued WCR revision, Topside has the following CoG and weight position relevant to loadout condition:

- Loadout Expected Weight 2280 ton including Spacers and SPMTs;
- X_G = 19.70 m;
- Y_G = 7.90 m;
- Z_G = 29.30 m.

BLPH loadout scheme with CoG position is shown in the next figure.

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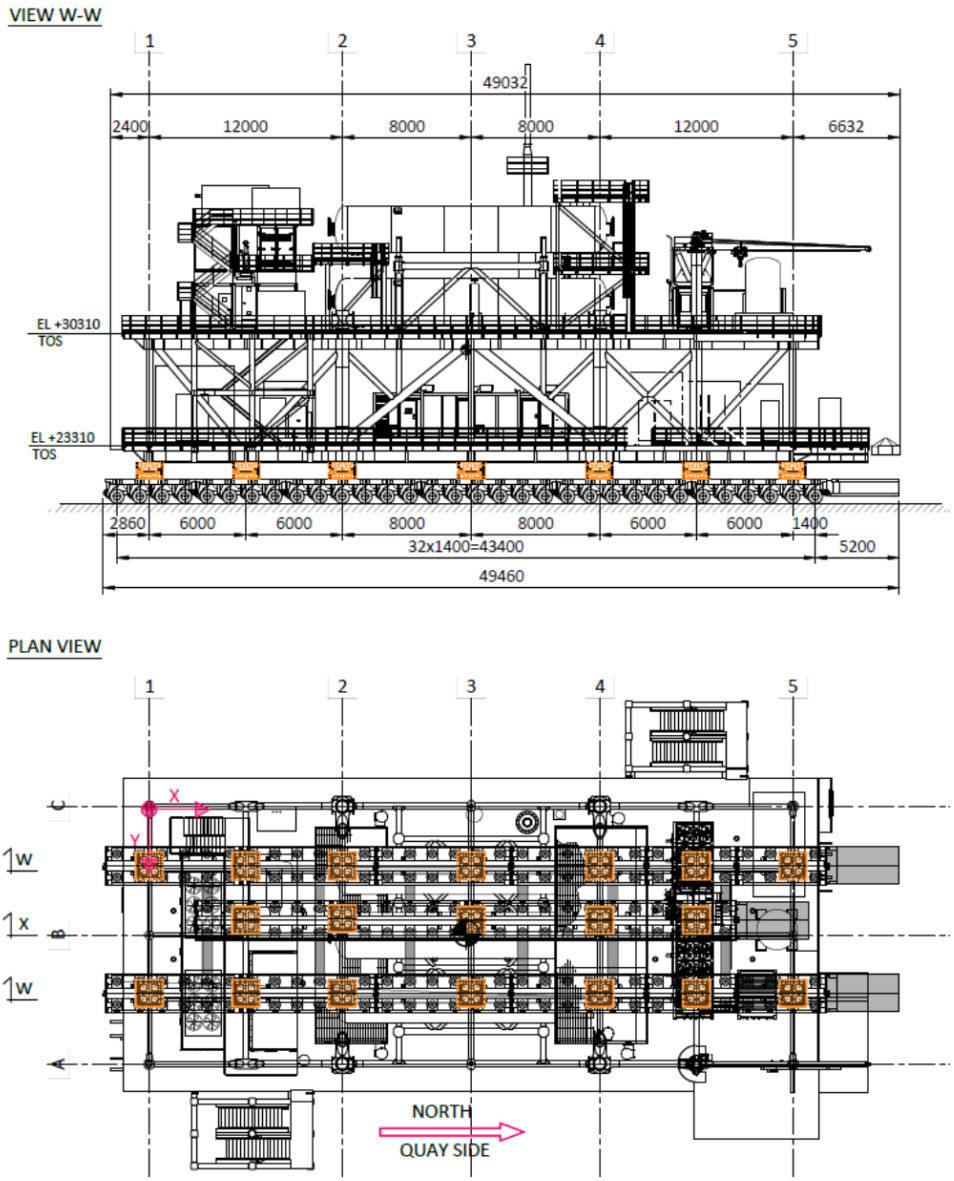


Figure 6.2 – BLPH loadout scheme

Before loadout operation, the final physical weighing operation will be performed in order to confirm the expected Weight and CoG. In case of the discrepancy in terms of weight and CoG position will be significant, the SPMT loads and ballasting sequence will be updated accordingly.

The following weights have been applied as external loads to the barge model.

- TP LOW-GRIL WEIGHT = 45 t
- BLPH GRILLAGE WEIGHT = 75 t

- CF WEIGHT = 28 t
- CF GRILLAGE WEIGHT = 0.5 t
- TP WEIGHT = 254.5 t

TRANSPORT CONFIGURATION: 88 AXLES			
ITEM weight (contingency included)			**1802 t**
SPMT dead weight			392,1 t
EQUIPMENT weight			87,9 t
TOTAL weight			2282 t
		BASE VALUES	**MAX VALUES**
Group A 20 Axles	Weight per axles	31,0 t	38,5 t
	Capacity per axles	48,0 t	48,0 t
	Cylinder pressure	189 bar	234 bar
	Contact pressure under the wheel	8,8 kg/cm^2	9,8 kg/cm^2
	Average Ground pressure	9,1 t/m^2	11,3 t/m^2
Group B 20 Axles	Weight per axles	31,0 t	38,5 t
	Capacity per axles	48,0 t	48,0 t
	Cylinder pressure	189 bar	234 bar
	Contact pressure under the wheel	8,8 kg/cm^2	9,8 kg/cm^2
	Average Ground pressure	9,1 t/m^2	11,3 t/m^2
Group C-D 48 Axles	Weight per axles	21,7 t	26,0 t
	Capacity per axles	48,0 t	48,0 t
	Cylinder pressure	132 bar	158 bar
	Contact pressure under the wheel	7,5 kg/cm^2	8,2 kg/cm^2
	Average Ground pressure	6,4 t/m^2	7,6 t/m^2

Figure 6.3 – Loads

For load out simulation the loads have been described as a set of concentrated forces, one per each trailer axle, i.e. at 1.4m interval. The following tables report the complete set of loads applied, with ref to the above fig. 6.2.

LoadNam	Weight	Xw	Yw	Zw
GC-1-01	21.7	0.000	-5.542	1.000
GC-1-02	21.7	-1.400	-5.542	1.000
GC-1-03	21.7	-2.800	-5.542	1.000
GC-1-04	21.7	-4.200	-5.542	1.000
GC-1-05	21.7	-5.600	-5.542	1.000
GC-1-06	21.7	-7.000	-5.542	1.000
GC-1-07	21.7	-8.400	-5.542	1.000

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GC-1-08	21.7	-9.800	-5.542	1.000
GC-1-09	21.7	-11.200	-5.542	1.000
GC-1-10	21.7	-12.600	-5.542	1.000
GC-1-11	21.7	-14.000	-5.542	1.000
GC-1-12	21.7	-15.400	-5.542	1.000
GC-1-13	21.7	-16.800	-5.542	1.000
GC-1-14	21.7	-18.200	-5.542	1.000
GC-1-15	21.7	-19.600	-5.542	1.000
GC-1-16	21.7	-21.000	-5.542	1.000
GC-1-17	21.7	-22.400	-5.542	1.000
GC-1-18	21.7	-23.800	-5.542	1.000
GC-1-19	21.7	-25.200	-5.542	1.000
GC-1-20	21.7	-26.600	-5.542	1.000
GC-1-21	21.7	-28.000	-5.542	1.000
GC-1-22	21.7	-29.400	-5.542	1.000
GC-1-23	21.7	-30.800	-5.542	1.000
GC-1-24	21.7	-32.200	-5.542	1.000
GC-1-25	21.7	-33.600	-5.542	1.000
GC-1-26	21.7	-35.000	-5.542	1.000
GC-1-27	21.7	-36.400	-5.542	1.000
GC-1-28	21.7	-37.800	-5.542	1.000
GC-1-29	21.7	-39.200	-5.542	1.000
GC-1-30	21.7	-40.600	-5.542	1.000
GC-1-31	21.7	-42.000	-5.542	1.000
GC-1-32	21.7	-43.400	-5.542	1.000
GC-2-01	10.85	-5.600	-2.967	1.000
GC-2-02	10.85	-7.000	-2.967	1.000
GC-2-03	10.85	-8.400	-2.967	1.000
GC-2-04	10.85	-9.800	-2.967	1.000
GC-2-05	10.85	-11.200	-2.967	1.000
GC-2-06	10.85	-12.600	-2.967	1.000
GC-2-07	10.85	-14.000	-2.967	1.000
GC-2-08	10.85	-15.400	-2.967	1.000
GC-2-09	10.85	-16.800	-2.967	1.000
GC-2-10	10.85	-18.200	-2.967	1.000
GC-2-11	10.85	-19.600	-2.967	1.000
GC-2-12	10.85	-21.000	-2.967	1.000
GC-2-13	10.85	-22.400	-2.967	1.000
GC-2-14	10.85	-23.800	-2.967	1.000

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GC-2-15	10.85	-25.200	-2.967	1.000
GC-2-16	10.85	-26.600	-2.967	1.000
GC-2-17	10.85	-28.000	-2.967	1.000
GC-2-18	10.85	-29.400	-2.967	1.000
GC-2-19	10.85	-30.800	-2.967	1.000
GC-2-20	10.85	-32.200	-2.967	1.000
GC-2-21	10.85	-33.600	-2.967	1.000
GC-2-22	10.85	-35.000	-2.967	1.000
GC-2-23	10.85	-36.400	-2.967	1.000
GC-2-24	10.85	-37.800	-2.967	1.000
GB-1-01	31.0	0.000	2.258	1.000
GB-1-02	31.0	-1.400	2.258	1.000
GB-1-03	31.0	-2.800	2.258	1.000
GB-1-04	31.0	-4.200	2.258	1.000
GB-1-05	31.0	-5.600	2.258	1.000
GB-1-06	31.0	-7.000	2.258	1.000
GB-1-07	31.0	-8.400	2.258	1.000
GB-1-08	31.0	-9.800	2.258	1.000
GB-1-09	31.0	-11.200	2.258	1.000
GB-1-10	31.0	-12.600	2.258	1.000
GB-1-11	31.0	-14.000	2.258	1.000
GB-1-12	31.0	-15.400	2.258	1.000
GB-1-13	31.0	-16.800	2.258	1.000
GB-1-14	31.0	-18.200	2.258	1.000
GB-1-15	31.0	-19.600	2.258	1.000
GB-1-16	31.0	-21.000	2.258	1.000
GB-2-01	15.5	-5.600	-1.517	1.000
GB-2-02	15.5	-7.000	-1.517	1.000
GB-2-03	15.5	-8.400	-1.517	1.000
GB-2-04	15.5	-9.800	-1.517	1.000
GB-2-05	15.5	-11.200	-1.517	1.000
GB-2-06	15.5	-12.600	-1.517	1.000
GB-2-07	15.5	-14.000	-1.517	1.000
GB-2-08	15.5	-15.400	-1.517	1.000
GB-2-09	15.5	-16.800	-1.517	1.000
GB-2-10	15.5	-18.200	-1.517	1.000
GB-2-11	15.5	-19.600	-1.517	1.000
GB-2-12	15.5	-21.000	-1.517	1.000
GA-1-17	31.0	-22.400	2.258	1.000

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GA-1-18	31.0	-23.800	2.258	1.000
GA-1-19	31.0	-25.200	2.258	1.000
GA-1-20	31.0	-26.600	2.258	1.000
GA-1-21	31.0	-28.000	2.258	1.000
GA-1-22	31.0	-29.400	2.258	1.000
GA-1-23	31.0	-30.800	2.258	1.000
GA-1-24	31.0	-32.200	2.258	1.000
GA-1-25	31.0	-33.600	2.258	1.000
GA-1-26	31.0	-35.000	2.258	1.000
GA-1-27	31.0	-36.400	2.258	1.000
GA-1-28	31.0	-37.800	2.258	1.000
GA-1-29	31.0	-39.200	2.258	1.000
GA-1-30	31.0	-40.600	2.258	1.000
GA-1-31	31.0	-42.000	2.258	1.000
GA-1-32	31.0	-43.400	2.258	1.000
GA-2-13	15.5	-22.400	-1.517	1.000
GA-2-14	15.5	-23.800	-1.517	1.000
GA-2-15	15.5	-25.200	-1.517	1.000
GA-2-16	15.5	-26.600	-1.517	1.000
GA-2-17	15.5	-28.000	-1.517	1.000
GA-2-18	15.5	-29.400	-1.517	1.000

Table 6.1 – Axles loads

6.2 BALLAST WATER MANAGEMENT

Barge is equipped with an internal ballast management system; therefore, water can be both moved to other tanks or discharged to the sea.

6.3 LOADOUT SEQUENCE

The above-described operation sequence was divided into the following steps:

Step 0 Barge ready for starting load-out of the topside. The ballast pattern is selected in order of having the barge deck at the same elevation as the quay.

Step 1 The first 2 axles of group C and B enter the barge bow.

Step 2 Trailers advance 4.2 m: next 3+3 axles of trailers of group C and B on board. Total axles on board: 8.

Step 3 Trailers advance 1.40 m: next 1+1 axles of trailers of group C and B on board plus first axle of internal train on board. Total axles on board: 11.

Step 4 Trailers advance 4.20 m: next 3+3 axles of trailers of group C and B and 3 axles of trailers

of group C/B on board. Total axles on board: C/B-20.

Step 5 Trailers advance 4.2 m: Total axles on board: C/B-29.

Step 6 Trailers advance 4.2 m: Total axles on board: C/B-38.

Step 7 Trailers advance 4.2 m: Total axles on board: C/B-44 and first axles of group A

Step 8 Trailers advance 4.2 m: Total axles on board: 56.

Step 9 Trailers advance 4.2 m: Total axles on board: 65.

Step 10 Trailers advance 4.2 m: Total axles on board: 74.

Step 11 Trailers advance 2.8 m: Total axles on board: 80.

Step 12 Trailers advance 2.8 m: Total axles on board: 84.

Step 13 Trailers advance 2.8 m: All trailers on board the barge.

Step 14 Trailers advance 5 m. shifting towards stern

Step 15 Trailers advance 4.36 m: topside reaches the transport position.

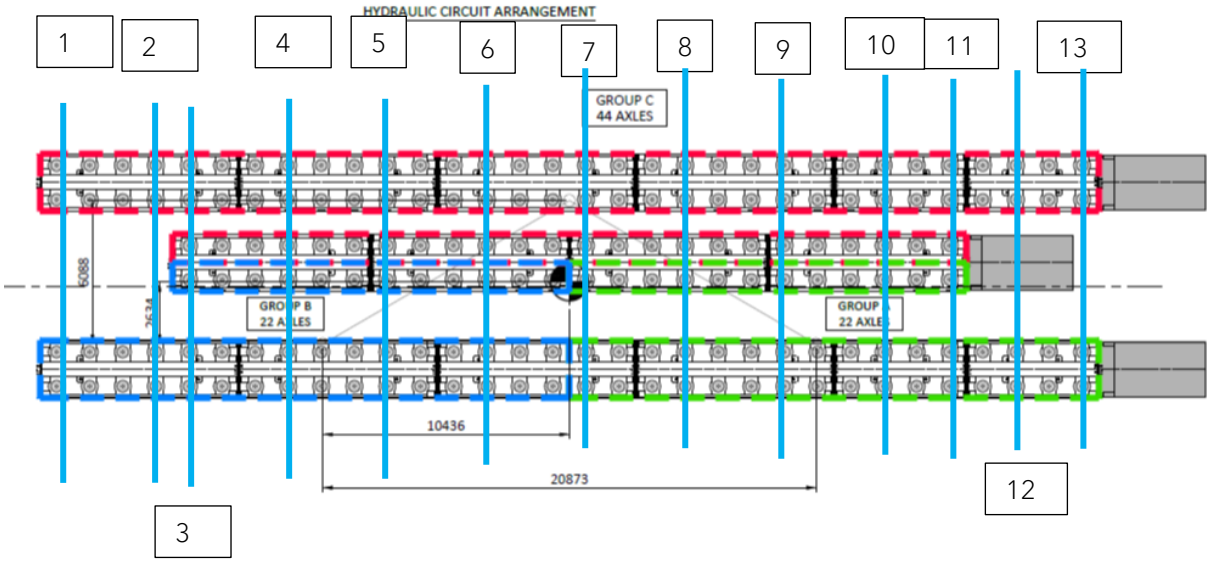
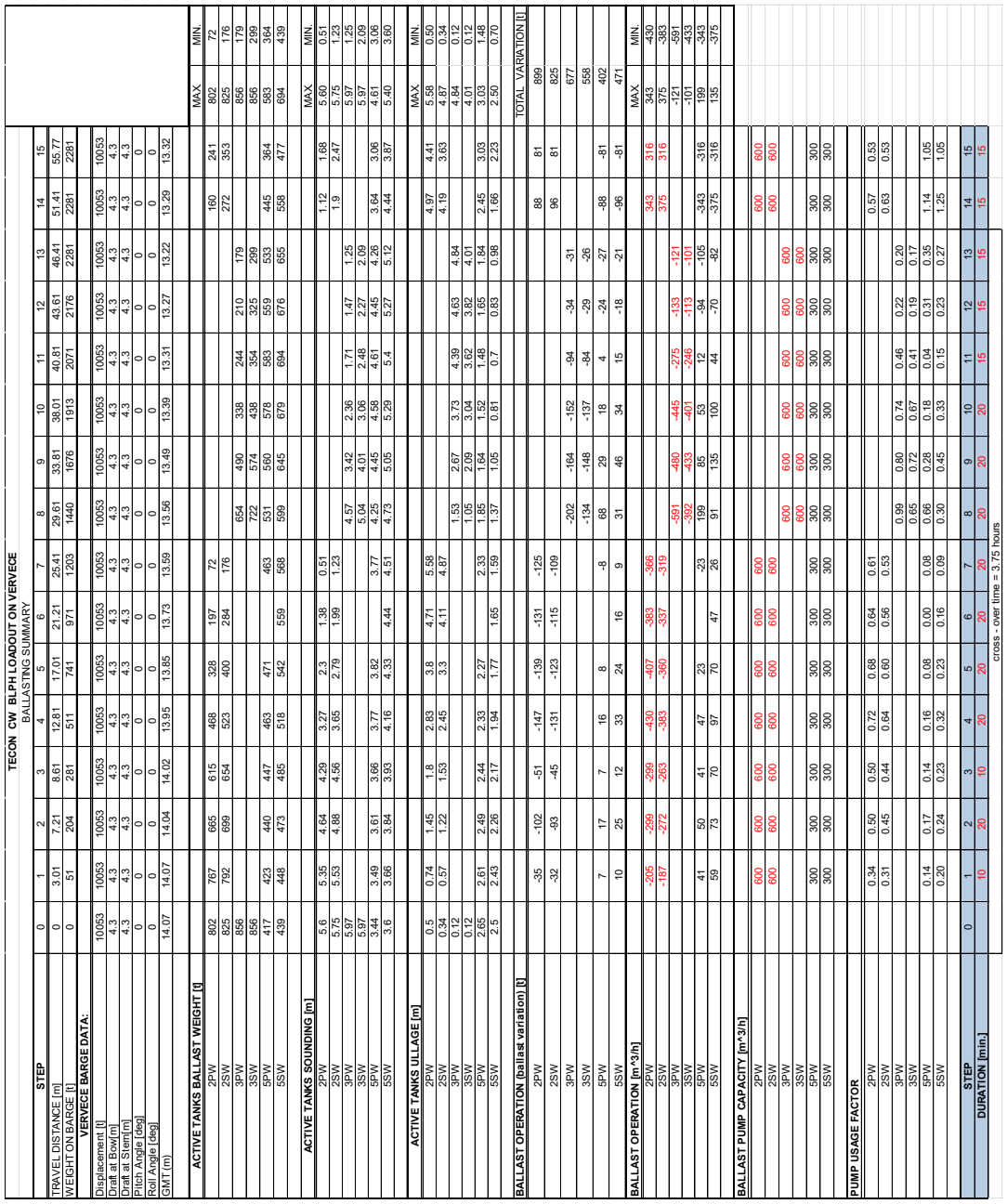


Figure 6.4 – Loadout Phases

Load out will be considered complete with BLPH in the final position.

The here below tables summarize the ballast variations.



TECON CW_BLPH LOADOUT ON VERVECE

BALLASTING SUMMARY

STEP	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
TRAVEL DISTANCE [m]	0	3.01	7.21	8.61	12.81	17.01	21.21	25.41	29.61	33.81	38.01	40.81	43.61	46.41	51.41	55.77		
WEIGHT ON BARGE [t]	0	51	204	281	511	741	971	1203	1440	1676	1913	2071	2176	2281	2281	2281		
VERVECE BARGE DATA:																		
Displacement [t]	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053	10053		
Draft at Bow[m]	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		
Draft at Stern[m]	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		
Pitch Angle [deg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Roll Angle [deg]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
GMT (m)	14.07	14.07	14.04	14.02	13.95	13.85	13.73	13.59	13.56	13.49	13.39	13.31	13.27	13.22	13.29	13.32		
ACTIVE TANKS BALLAST WEIGHT [t]																	MAX	MIN
2PW	802	767	665	615	468	328	197	72							160	241	802	72
2SW	825	792	699	654	523	400	284	176							272	353	825	176
3PW	856								654	490	338	244	210	179			856	179
3SW	856								722	574	438	354	325	299			856	299
5PW	417	423	440	447	463	471		463	531	560	578	583	559	533	445	364	583	364
5SW	439	448	473	485	518	542	559	568	599	645	679	694	676	655	558	477	694	439
ACTIVE TANKS SOUNDING [m]																	MAX	MIN
2PW	5.6	5.35	4.64	4.29	3.27	2.3	1.38	0.51							1.12	1.68	5.60	0.51
2SW	5.75	5.53	4.88	4.56	3.65	2.79	1.99	1.23							1.9	2.47	5.75	1.23
3PW	5.97								4.57	3.42	2.36	1.71	1.47	1.25			5.97	1.25
3SW	5.97								5.04	4.01	3.06	2.48	2.27	2.09			5.97	2.09
5PW	3.44	3.49	3.61	3.66	3.77	3.82		3.77	4.25	4.45	4.58	4.61	4.45	4.26	3.64	3.06	4.61	3.06
5SW	3.6	3.66	3.84	3.93	4.16	4.33	4.44	4.51	4.73	5.05	5.29	5.4	5.27	5.12	4.44	3.87	5.40	3.60
ACTIVE TANKS ULLAGE [m]																	MAX	MIN
2PW	0.5	0.74	1.45	1.8	2.83	3.8	4.71	5.58							4.97	4.41	5.58	0.50
2SW	0.34	0.57	1.22	1.53	2.45	3.3	4.11	4.87							4.19	3.63	4.87	0.34
3PW	0.12								1.53	2.67	3.73	4.39	4.63	4.84			4.84	0.12
3SW	0.12								1.05	2.09	3.04	3.82	4.01				4.01	0.12
5PW	2.65	2.61	2.49	2.44	2.33	2.27	2.33	1.85	1.64	1.92	1.48	1.65	1.84	2.45	3.03	1.48		
5SW	2.5	2.43	2.26	2.17	1.94	1.77	1.65	1.59	1.37	1.05	0.81	0.7	0.83	0.98	1.66	2.23	3.03	0.70
BALLAST OPERATION (ballast variation) [t]																	2.50	TOTAL VARIATION [t]
2PW		-35	-102	-51	-147	-139	-131	-125							88	81	899	
2SW		-32	-93	-45	-131	-123	-115	-109							96	81	825	
3PW									-202	-164	-152	-94	-34	-31			677	
3SW									-134	-148	-137	-84	-29	-26			558	
5PW		7	17	7	16	8		-8	68	29	18	4	-24	-27	-88	-81	402	
5SW		10	25	12	33	24	16	9	31	46	34	15	-18	-21	-96	-81	471	
BALLAST OPERATION [m^3/h]																	MAX	MIN
2PW		-205	-299	-299	-430	-407	-383	-366							343	316	343	-430
2SW		-187	-272	-283	-383	-360	-337	-319							375	316	375	-383
3PW									-591	-480	-445	-275	-133	-121			121	-591
3SW									-392	-433	-401	-246	-113	-101			-101	-433
5PW		41	50	41	47	23		-23	199	85	53	12	-94	-105	-343	-316	-316	-343
5SW		59	73	70	97	70	47	26	91	135	100	44	-70	-82	-375	-316	135	-375
BALLAST PUMP CAPACITY [m^3/h]																		
2PW		600	600	600	600	600	600	600							600	600		
2SW		600	600	600	600	600	600	600							600	600		
3PW									600	600	600	600	600	600				
3SW									600	600	600	600	600	600				
5PW		300	300	300	300	300	300	300	300	300	300	300	300	300	300	300		
5SW		300	300	300	300	300	300	300	300	300	300	300	300	300	300	300		
PUMP USAGE FACTOR																		
2PW		0.34	0.50	0.50	0.72	0.68	0.64	0.61							0.57	0.53		
2SW		0.31	0.45	0.44	0.64	0.60	0.56	0.53							0.63	0.53		
3PW									0.99	0.80	0.74	0.46	0.22	0.20				
3SW									0.65	0.72	0.67	0.41	0.19	0.17				
5PW		0.14	0.17	0.14	0.16	0.08	0.00	0.08	0.66	0.28	0.18	0.04	0.31	0.35	1.14	1.05		
5SW		0.20	0.24	0.23	0.32	0.23	0.16	0.09	0.30	0.45	0.33	0.15	0.23	0.27	1.25	1.05		
STEP	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
DURATION [min.]		10	20	10	20	20	20	20	20	20	20	15	15	15	15	15		

cross - over time = 3.75 hours

Table 6.2 – Loadout summary Tables

From the above table the total amount of moved water is 2282 t.

6.4 MOSES OUTPUT SUMMARY

Weight ballast (t)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Barge draft [m]	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
2PW	767	665	615	468	328	197	72							160	241
2SW	792	699	654	523	400	284	176							272	353
3PW								654	490	338	244	210	179		
3SW								722	574	438	354	325	299		
5PW	423	440	447	463	471	471	463	531	560	578	583	559	533	445	364
5SW	448	473	485	518	542	559	568	599	645	679	694	676	655	558	477

Ballast Sounding (m)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Barge draft [m]	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
2PW	5.35	4.64	4.29	3.27	2.3	1.38	0.51							1.12	1.68
2SW	5.53	4.88	4.56	3.65	2.79	1.99	1.23							1.9	2.47
3PW								4.57	3.42	2.36	1.71	1.47	1.25		
3SW								5.04	4.01	3.06	2.48	2.27	2.09		
5PW	3.49	3.61	3.66	3.77	3.82	3.82	3.77	4.25	4.45	4.58	4.61	4.45	4.26	3.64	3.06
5SW	3.66	3.84	3.93	4.16	4.33	4.44	4.51	4.73	5.05	5.29	5.4	5.27	5.12	4.44	3.87

Weight ballast Variation (t)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Barge draft [m]	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
2PW	-35	-102	-51	-147	-139	-131	-125							88	81
2SW	-32	-93	-45	-131	-123	-115	-109							96	81
3PW								-202	-164	-152	-94	-34	-31		
3SW								-134	-148	-137	-84	-29	-26		
5PW	7	17	7	16	8		-8	68	29	18	4	-24	-27	-88	-81
5SW	10	25	12	33	24	16	9	31	46	34	15	-18	-21	-96	-81

Ballast Ullage (t)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Barge draft [m]	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
2PW	0.74	1.45	1.8	2.83	3.8	4.71	5.58							4.97	4.41
2SW	0.57	1.22	1.53	2.45	3.3	4.11	4.87							4.19	3.63
3PW								1.53	2.67	3.73	4.39	4.63	4.84		
3SW								1.05	2.09	3.04	3.62	3.82	4.01		
5PW	2.61	2.49	2.44	2.33	2.27	2.27	2.33	1.85	1.64	1.52	1.48	1.65	1.84	2.45	3.03
5SW	2.43	2.26	2.17	1.94	1.77	1.65	1.59	1.37	1.05	0.81	0.7	0.83	0.98	1.66	2.23

Table 6.3 – Loadout summary Tables - Detailed

Ballast variation lower than 15 ton are to be considered for numerical stability only.

6.4.1 Step 0: barge ready for loadout. Barge is with 4.30m draft evenkeel

Being the distance between quay and barge stern <= 1.0m, the load of the axles is considered onshore on onboard.

Barge is with 4.30m draft even keel

VERVECE - BALLAST PLAN - load-out BLPH - Ph.0 - Draft = 4.30m evenkeel

STERN						BOW
	52.5% 5PW u=2.65m		full 4PW	full 3PW	92.0% 2PW u=0.50m	50% 1PW
	53% 5PC		30.0% 4PC u=4.30m	empty 3PC	empty 2PC	full 1PC
	55% 5SC		30.0% 4SC u=4.30m	empty 3SC	empty 2SC	full 1SC
	55.6% 5SW u=2.50m		full 4SW	full 3SW	94.5% 2SW u=0.35m	50% 1SW

Figure 6.5 – Loadout Phase 0

--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY

	5PW 417 t	4PW Full	3PW Full	2PW 802 t	1PW 117 t
	5PC 295 t	4PC Empty	3PC Empty	2PC Empty	1PC Full
	5SC 291 t	4SC Empty	3SC Empty	2SC Empty	1SC Full
	5SW 439 t	4SW Full	3SW Full	2SW 825 t	1SW 117 t

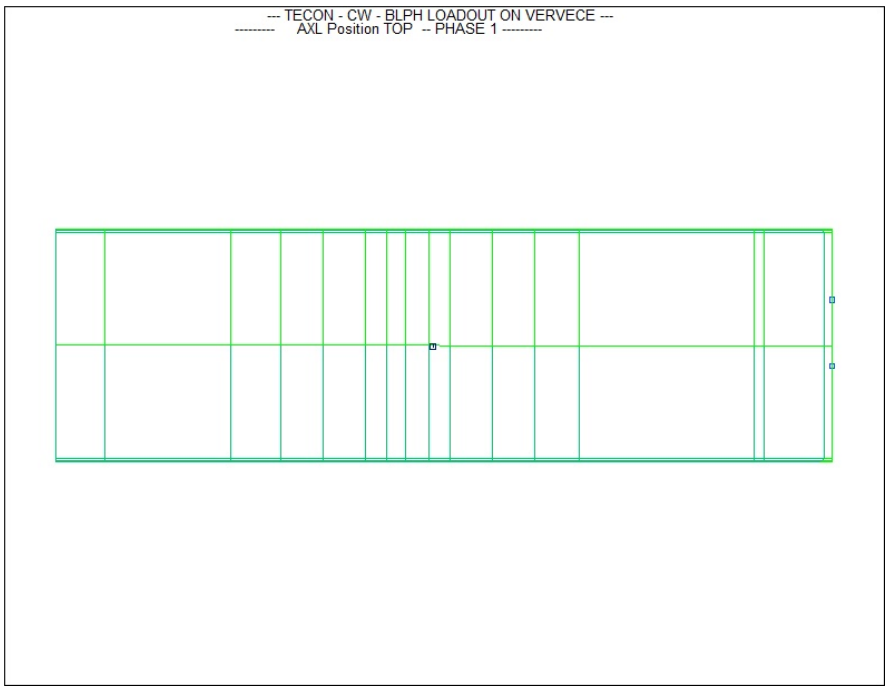
LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)

PHASE: 0 STRUCTURE WEIGHT ON BARGE(t): 0 DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00

Phase -0-

Tank No	Ballast	Sounding	Ullage	Tank No	Ballast	Sounding	Ullage
1PC	230	6,02	,08	3SC	26	,18	5,91
1PW	117	4,06	2,04	3SW	856	5,97	,12
1SC	230	6,02	,08	4PC	262	1,83	4,27
1SW	117	4,06	2,04	4PW	856	5,97	,12
2PC	26	,18	5,91	4SC	262	1,83	4,27
2PW	802	5,60	,50	4SW	856	5,97	,12
2SC	26	,18	5,91	5PC	295	3,96	2,14
2SW	825	5,75	,34	5PW	417	3,44	2,65
3PC	26	,18	5,91	5SC	291	3,96	2,14
3PW	856	5,97	,12	5SW	439	3,60	2,50

6.4.2 Step 1



--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY

Barge pump
PS - OUT

	5PW 7 t	4PW	3PW	2PW -35 t	1PW
	5PC	4PC	3PC	2PC	1PC
	5SC	4SC	3SC	2SC	1SC
	5SW 10 t	4SW	3SW	2SW -32 t	1SW

Barge pump
STB - OUT

PHASE: 1
TRAVEL DISTANCE: 3,01

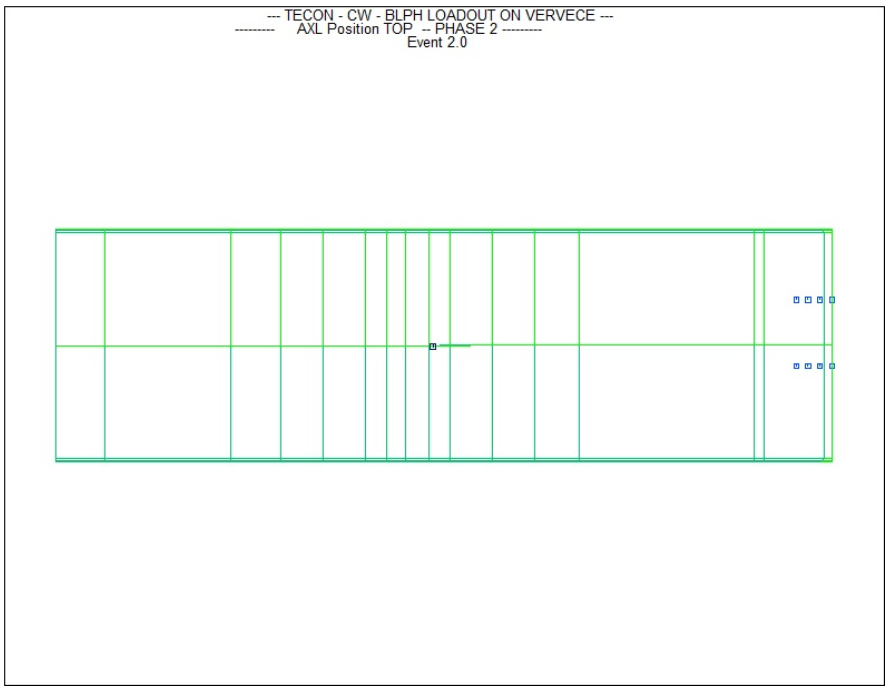
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 51,1

Phase -1-

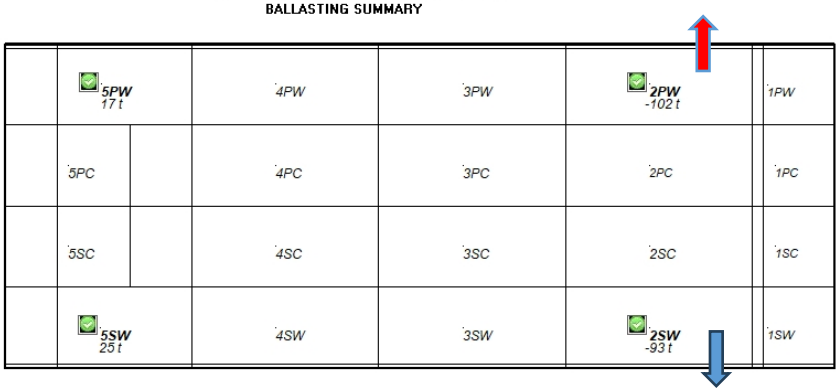
Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-35	5,35	-,24	,74	,24	205,
2SW	-32	5,53	-,23	,57	,23	187,
5PW	7	3,49	,05	2,61	-,05	41,
5SW	10	3,66	,07	2,43	-,07	59,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.3 Step 2



--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY



Barge pump PS - OUT

Barge pump STB - OUT

PHASE: 2
TRAVEL DISTANCE: 7,21

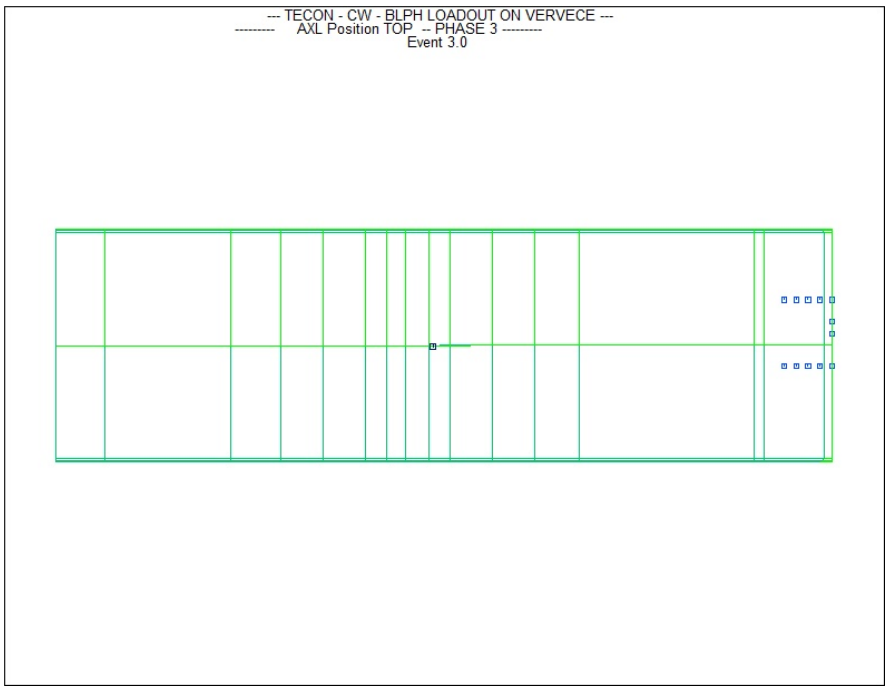
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 204,4

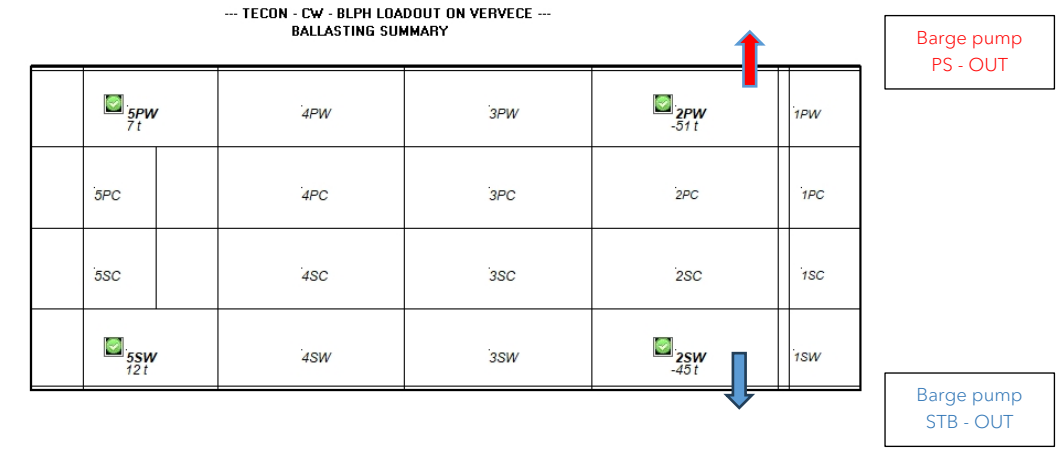
Phase -2-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-102	4,64	-,71	1,45	,71	299,
2SW	-93	4,88	-,65	1,22	,65	272,
5PW	17	3,61	,12	2,49	-,12	50,
5SW	25	3,84	,18	2,26	-,18	73,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.4 Step 3





PHASE: 3
TRAVEL DISTANCE: 8,61

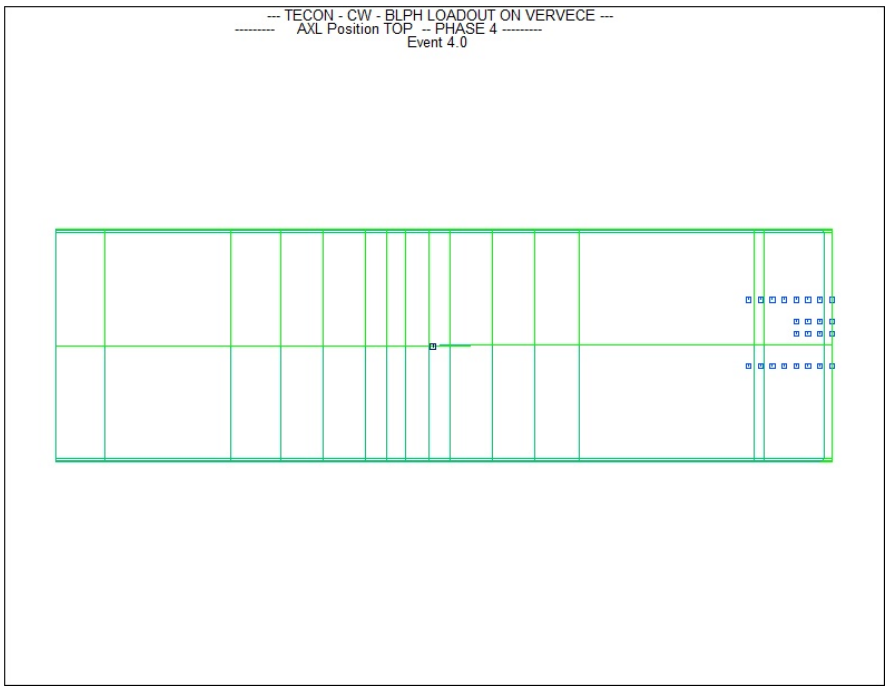
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 281

Phase -3-

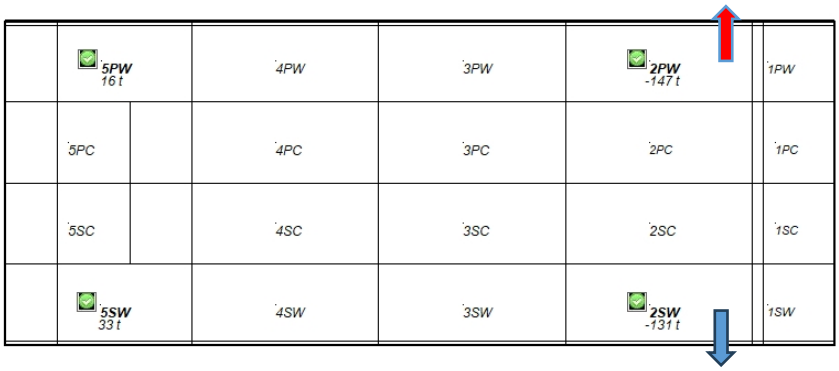
Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-51	4,29	-,35	1,80	,35	299,
2SW	-45	4,56	-,31	1,53	,31	263,
5PW	7	3,66	,05	2,44	-,05	41,
5SW	12	3,93	,09	2,17	-,09	70,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.5 Step 4



--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY



Barge pump
PS - OUT

Barge pump
STB - OUT

PHASE: 4
TRAVEL DISTANCE: 12,81

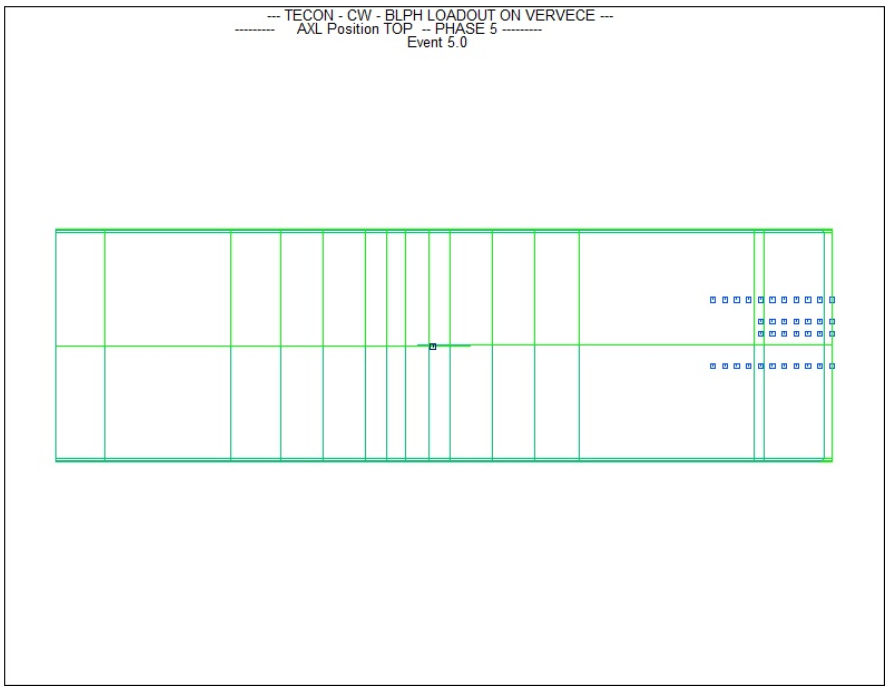
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 511

Phase -4-

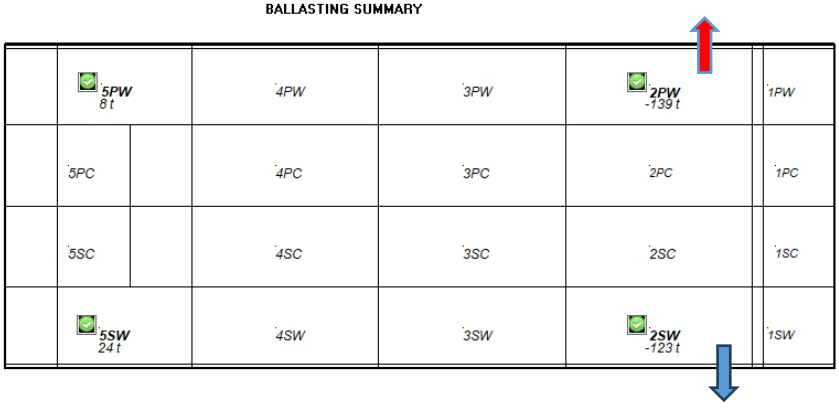
Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-147	3,27	-1,03	2,83	1,03	430,
2SW	-131	3,65	-,91	2,45	,91	383,
5PW	16	3,77	,11	2,33	-,11	47,
5SW	33	4,16	,23	1,94	-,23	97,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.6 Step 5



--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY



Barge pump PS - OUT

Barge pump STB - OUT

PHASE: 5
TRAVEL DISTANCE: 17,01

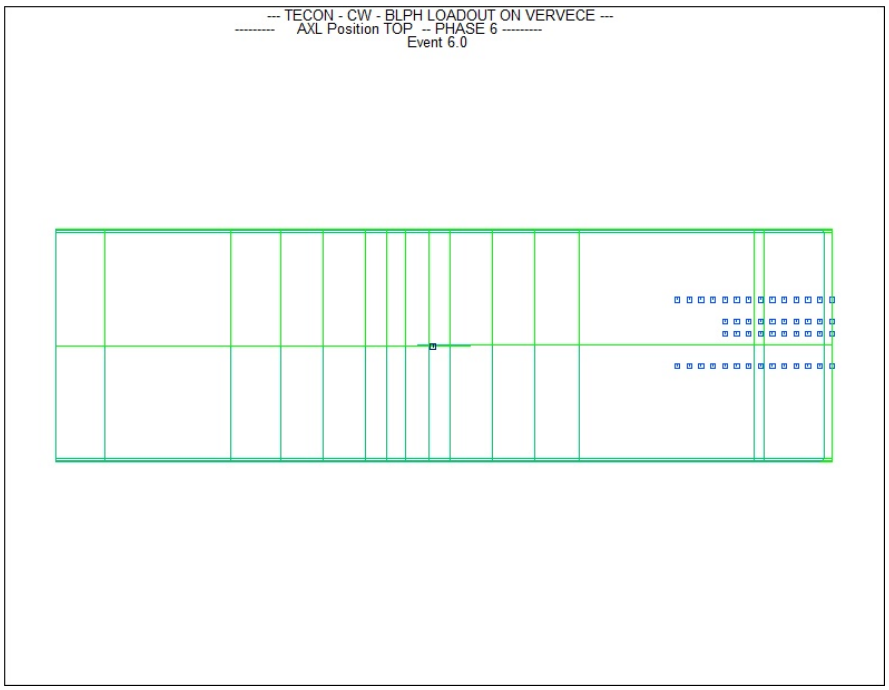
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 740,9

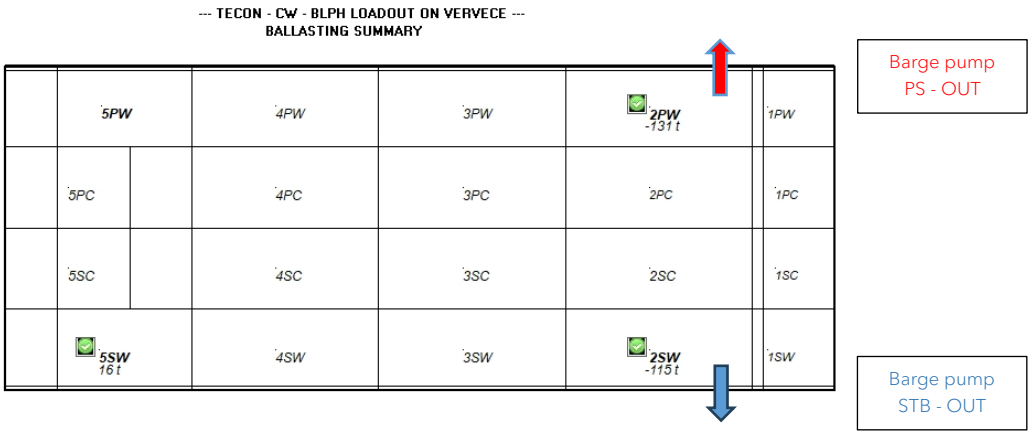
Phase -5-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-139	2,30	-,97	3,80	,97	407,
2SW	-123	2,79	-,86	3,30	,86	360,
5PW	8	3,82	,05	2,27	-,05	23,
5SW	24	4,33	,17	1,77	-,17	70,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.7 Step 6





PHASE: 6
TRAVEL DISTANCE: 21,21

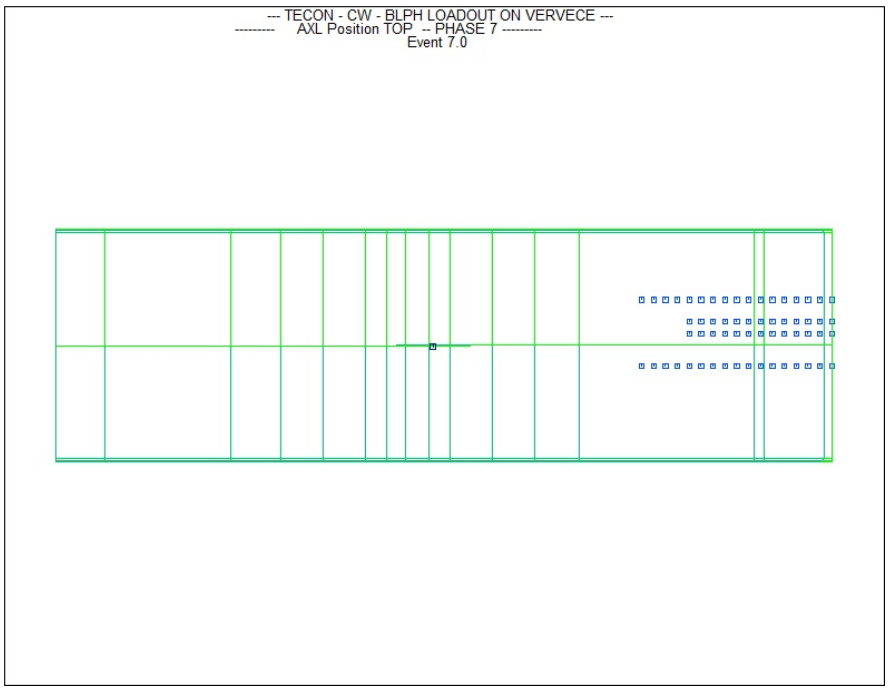
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 970,9

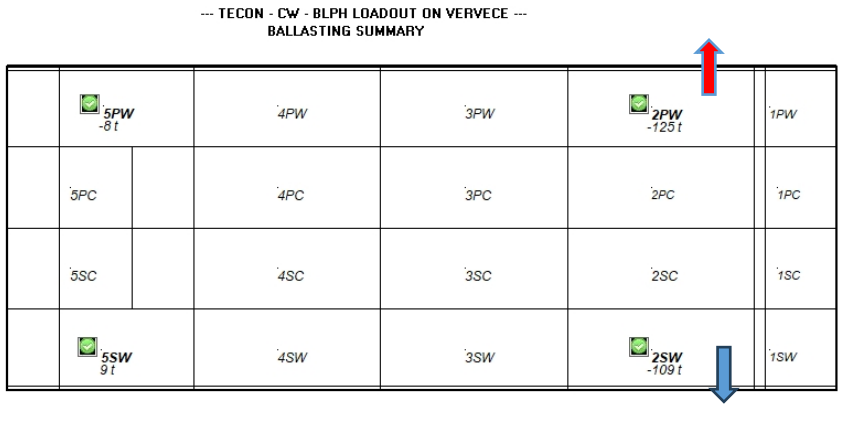
Phase -6-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-131	1,38	-,91	4,71	,91	383,
2SW	-115	1,99	-,80	4,11	,80	337,
5SW	16	4,44	,12	1,65	-,12	47,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.8 Step 7





PHASE: 7
TRAVEL DISTANCE: 25,41

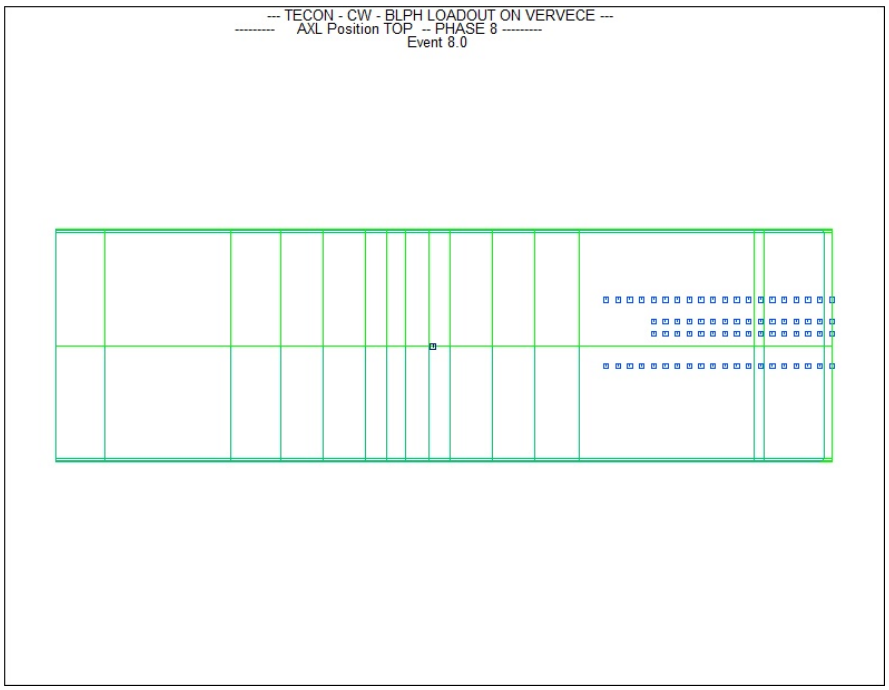
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 1203,1

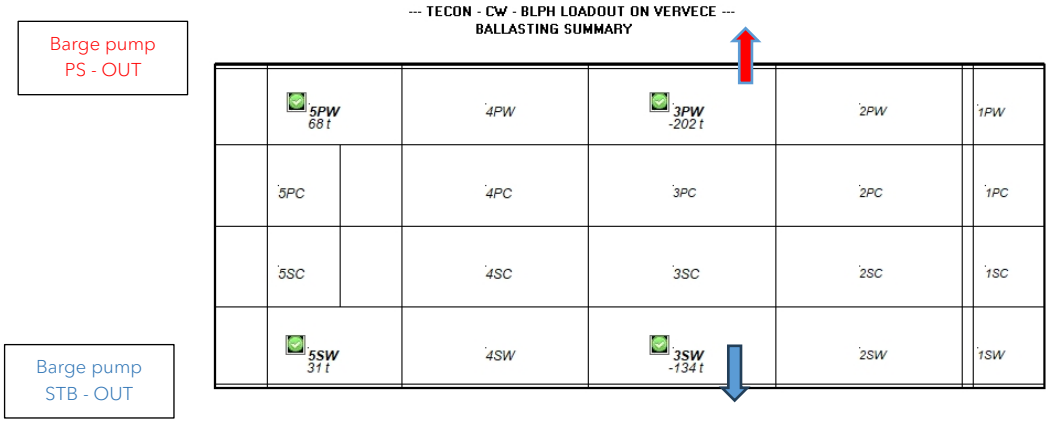
Phase -7-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	-125	,51	-,87	5,58	,87	366,
2SW	-109	1,23	-,76	4,87	,76	319,
5PW	-8	3,77	-,05	2,33	,05	23,
5SW	9	4,51	,06	1,59	-,06	26,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.9 Step 8





PHASE: 8
TRAVEL DISTANCE: 29,61

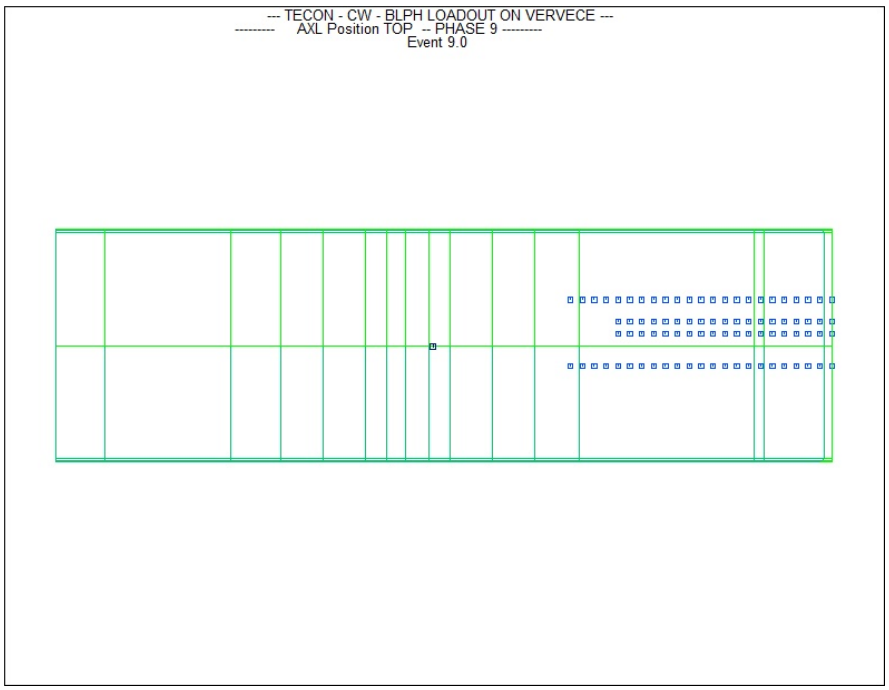
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 1439,8

Phase -8-

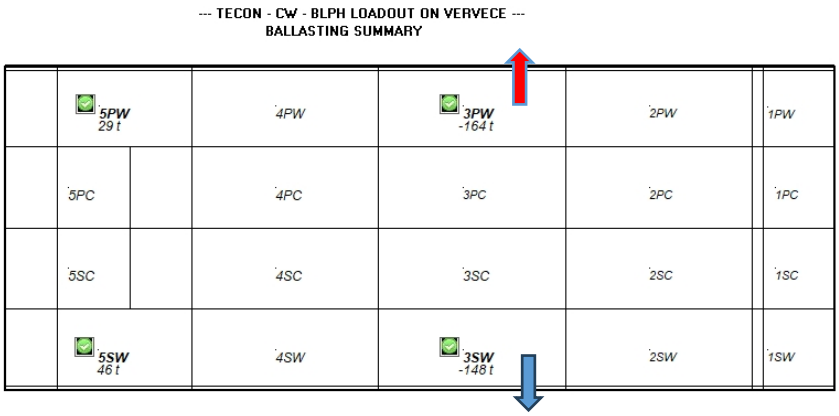
Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-202	4,57	-1,41	1,53	1,41	591,
3SW	-134	5,04	-,93	1,05	,93	392,
5PW	68	4,25	,48	1,85	-,48	199,
5SW	31	4,73	,22	1,37	-,22	91,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.10 Step 9



Barge pump PS - OUT



Barge pump STB - OUT

PHASE: 9
TRAVEL DISTANCE: 33,81

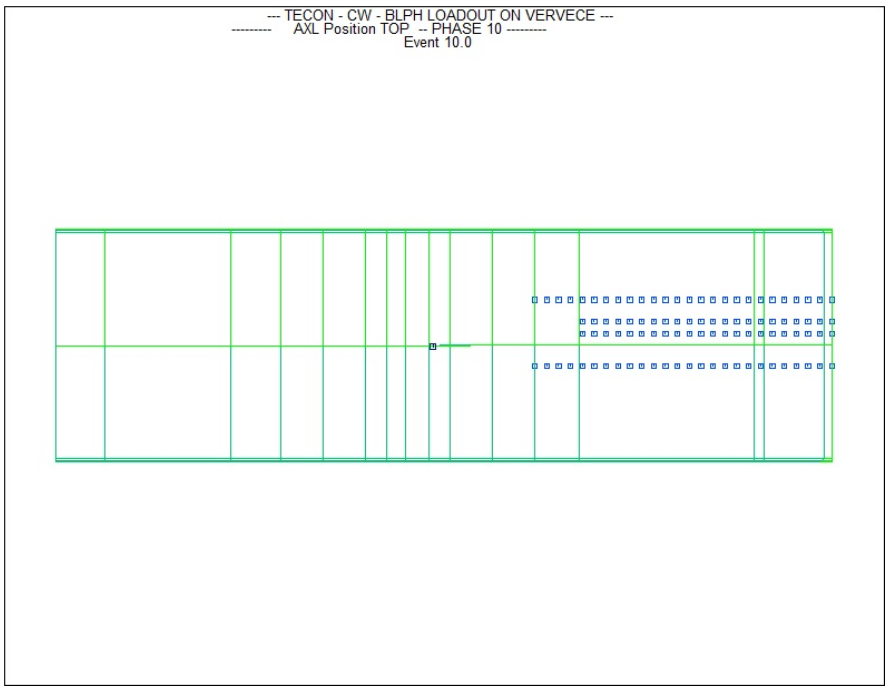
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 1676,5

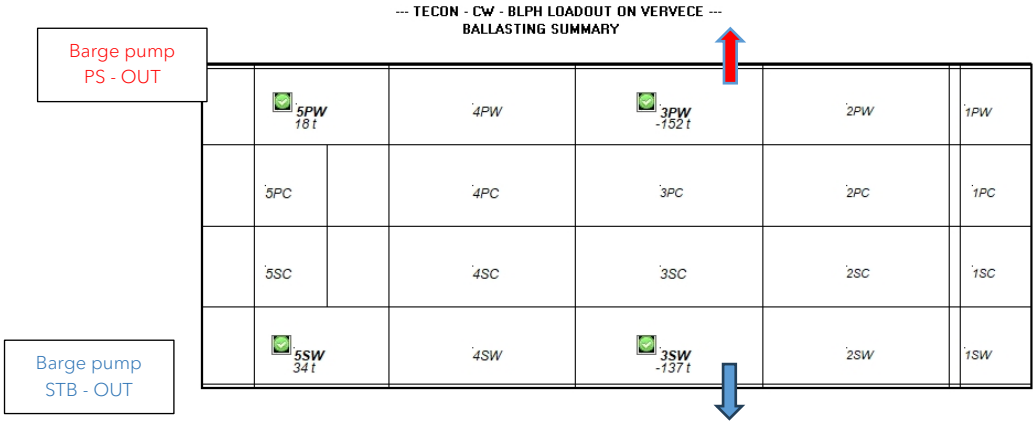
Phase -9-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-164	3,42	-1,14	2,67	1,14	480,
3SW	-148	4,01	-1,03	2,09	1,03	433,
5PW	29	4,45	,21	1,64	-,21	85,
5SW	46	5,05	,32	1,05	-,32	135,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.11 Step 10





PHASE: 10
TRAVEL DISTANCE: 38,01

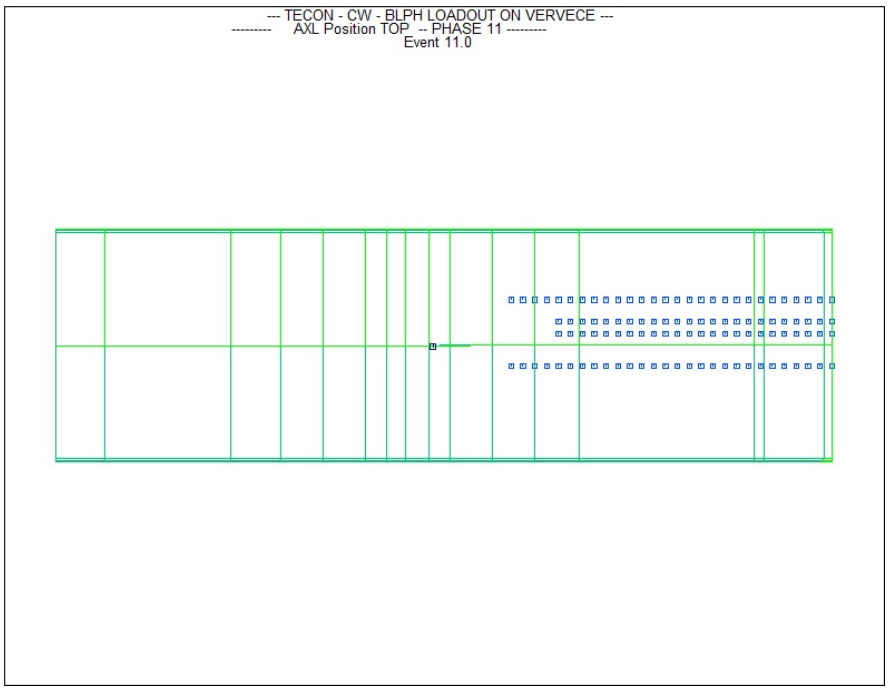
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 1913,2

Phase -10-

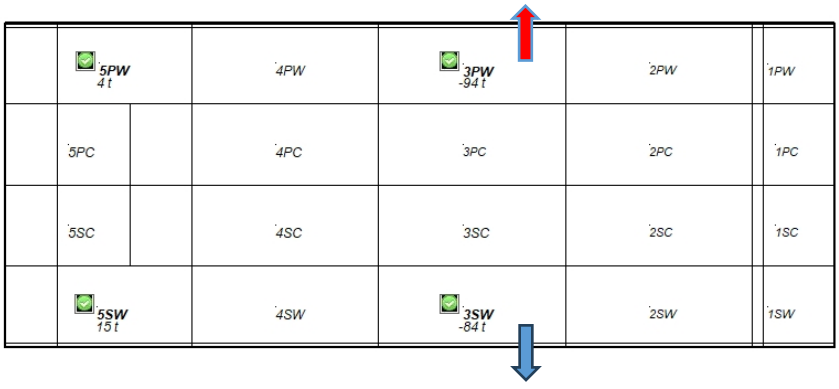
Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-152	2,36	-1,06	3,73	1,06	445,
3SW	-137	3,06	-,95	3,04	,95	401,
5PW	18	4,58	,13	1,52	-,13	53,
5SW	34	5,29	,24	,81	-,24	100,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.12 Step 11



Barge pump PS - OUT



Barge pump STB - OUT

PHASE: 11
TRAVEL DISTANCE: 40,81

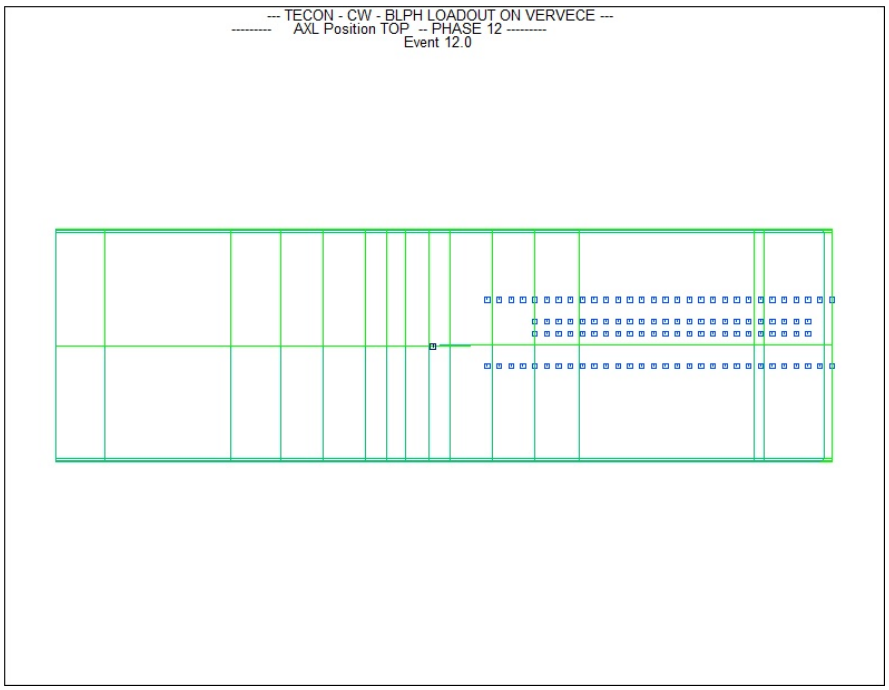
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 2071

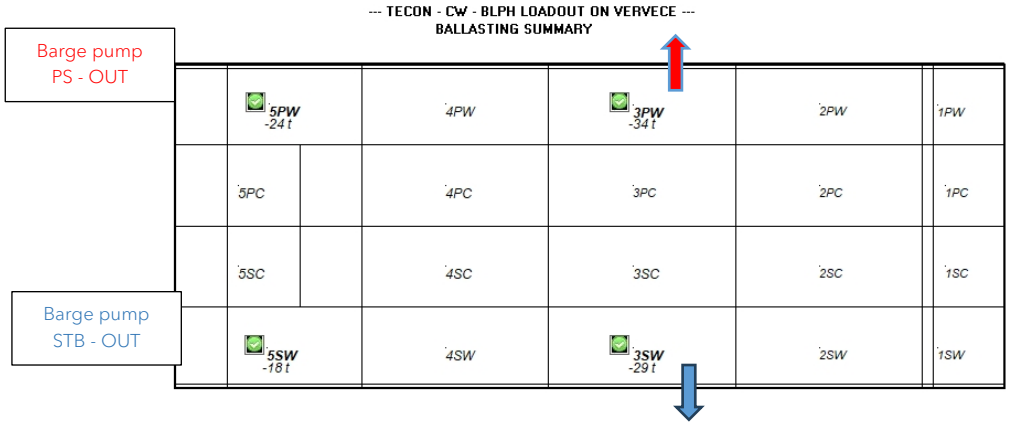
Phase -11-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-94	1,71	-,65	4,39	,65	275,
3SW	-84	2,48	-,58	3,62	,58	246,
5PW	4	4,61	,03	1,48	-,03	12,
5SW	15	5,40	,11	,70	-,11	44,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.13 Step 12





PHASE: 12
TRAVEL DISTANCE: 43,61

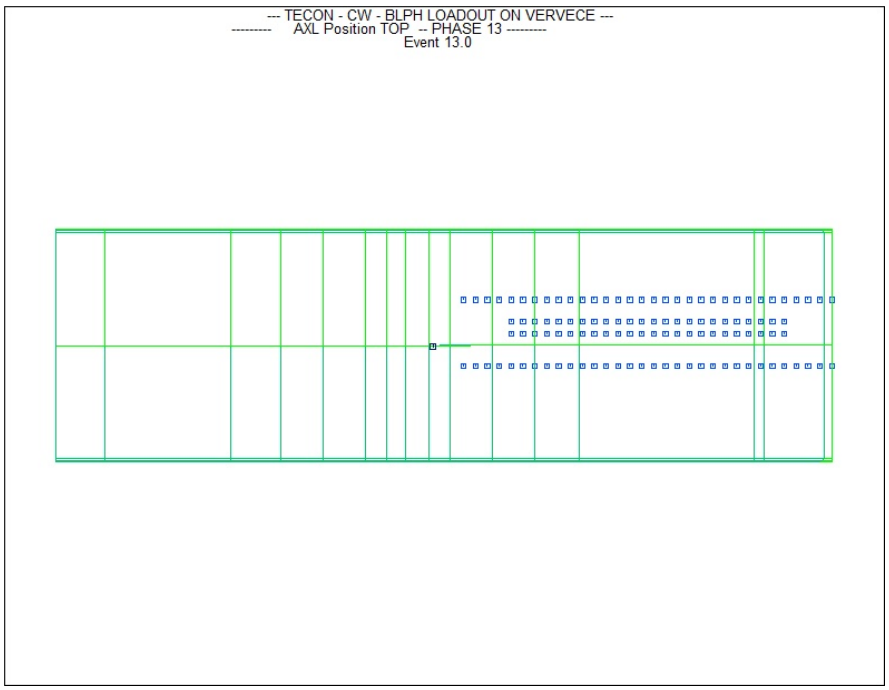
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 2176,2

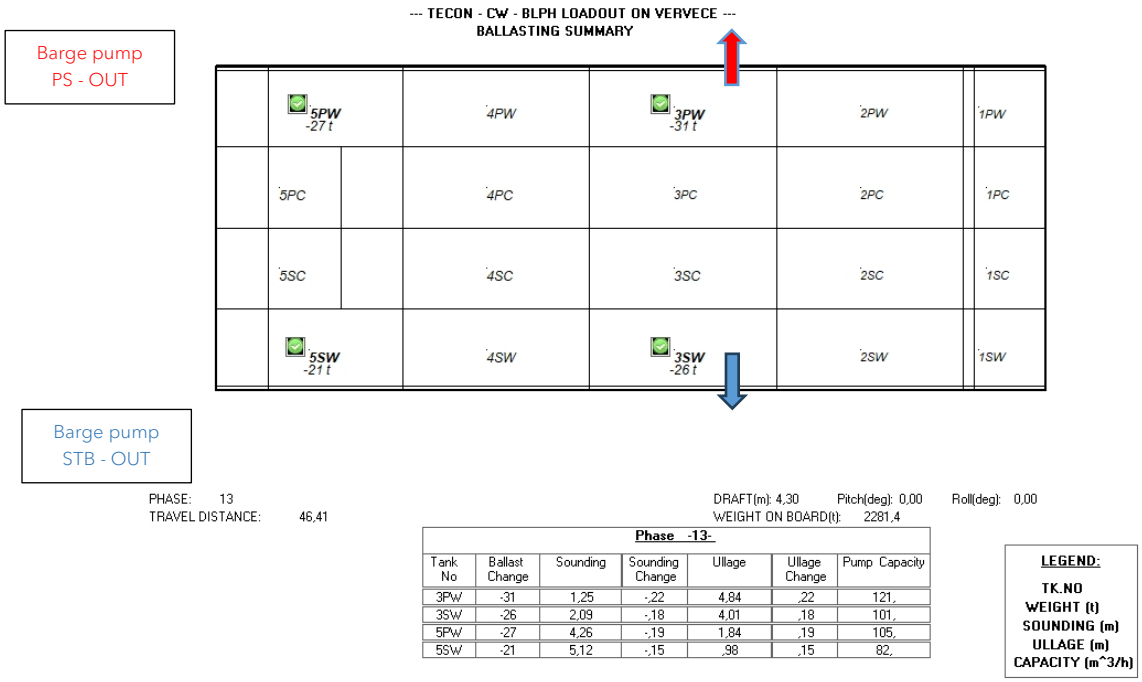
Phase -12-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-34	1,47	-,24	4,63	,24	133,
3SW	-29	2,27	-,20	3,82	,20	113,
5PW	-24	4,45	-,17	1,65	,17	94,
5SW	-18	5,27	-,13	,83	,13	70,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.14 Step 13: All the axles on board.





PHASE: 13
TRAVEL DISTANCE: 46,41

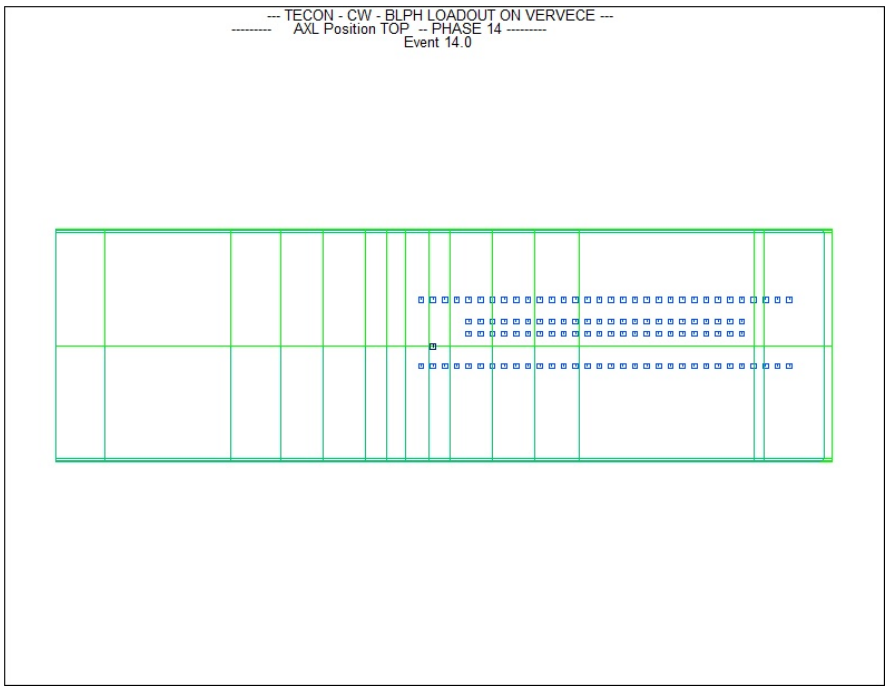
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 2281,4

Phase -13-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
3PW	-31	1,25	-,22	4,84	,22	121,
3SW	-26	2,09	-,18	4,01	,18	101,
5PW	-27	4,26	-,19	1,84	,19	105,
5SW	-21	5,12	-,15	,98	,15	82,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

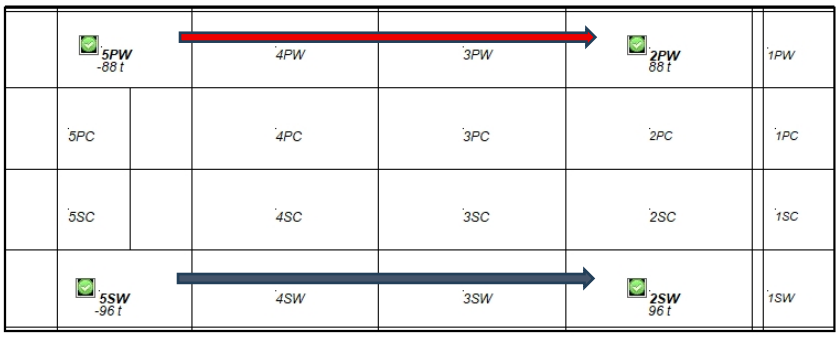
6.4.15 Step 14: Shifting phase of 5.0m



--- TECON - CW - BLPH LOADOUT ON VERVECE ---
BALLASTING SUMMARY

Barge pump PS

Barge pump STB



PHASE: 14
TRAVEL DISTANCE: 51,41

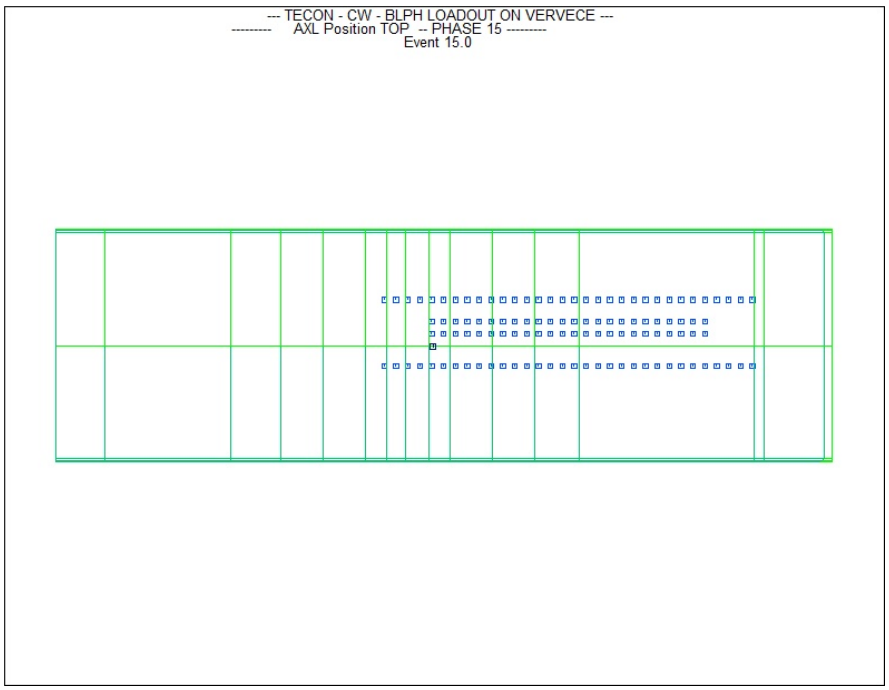
DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 2281,4

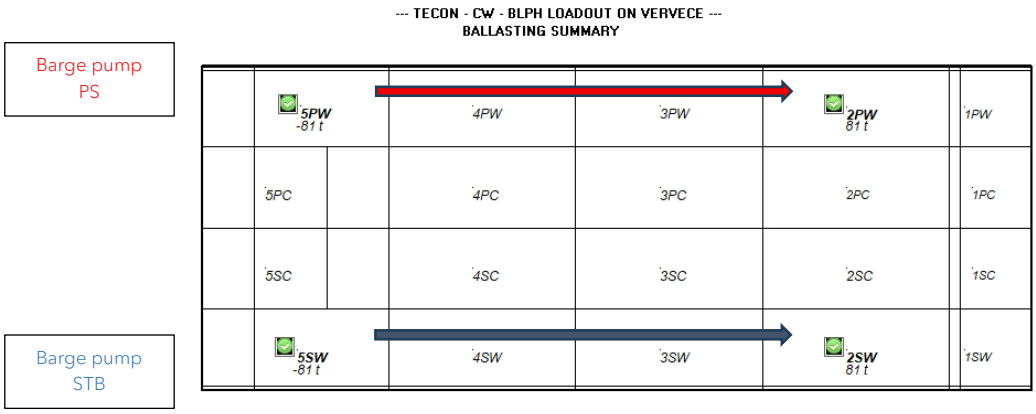
Phase -14-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	88	1,12	,61	4,97	-,61	343,
2SW	96	1,90	,67	4,19	-,67	375,
5PW	-88	3,64	-,62	2,45	,62	343,
5SW	-96	4,44	-,68	1,66	,68	375,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.4.16 Step 15: Shifting phase of 4.36m. Topside reaches the transport position.





PHASE: 15
TRAVEL DISTANCE: 55,77

DRAFT(m): 4,30 Pitch(deg): 0,00 Roll(deg): 0,00
WEIGHT ON BOARD(t): 2281,4

Phase -15-

Tank No	Ballast Change	Sounding	Sounding Change	Ullage	Ullage Change	Pump Capacity
2PW	81	1,68	,56	4,41	-,56	316,
2SW	81	2,47	,56	3,63	-,56	316,
5PW	-81	3,06	-,58	3,03	,58	316,
5SW	-81	3,87	-,57	2,23	,57	316,

LEGEND:
TK.NO
WEIGHT (t)
SOUNDING (m)
ULLAGE (m)
CAPACITY (m^3/h)

6.5 BALLAST CORRECTION FOR TIDE

The correction to compensate for sea level variation at start of LO operation is shown below.

VERVECE - BALLAST PLAN - load-out Ph.0. - HIGH TIDE, D=4.70m trim -0.44deg

	52.5% **5PW** u=2.65m	full **4PW**	full **3PW**	92.0% **2PW** u=0.50m	full **1PW**
STERN	50% **5PC** u=2.67m	30.0% **4PC** u=4.30m	empty **3PC**	empty **2PC**	full **1PC**
	51% **5SC** u=2.63m	30.0% **4SC** u=4.30m	empty **3SC**	empty **2SC**	full **1SC**
	55.6% **5SW** u=2.50m	full **4SW**	full **3SW**	94.5% **2SW** u=0.35m	full **1SW**

BOW

d=4.00m **d=4.70m**

VERVECE - BALLAST PLAN - load-out Ph.0. - LOW TIDE D=3.90m, trim 0.42deg

	52.5% **5PW** u=2.65m	full **4PW**	full **3PW**	92.0% **2PW** u=0.50m	empty **1PW**
STERN	72% **5PC** u=1.50	30.0% **4PC** u=4.30m	empty **3PC**	empty **2PC**	full **1PC**
	73% **5SC** u=1.45m	30.0% **4SC** u=4.30m	empty **3SC**	empty **2SC**	full **1SC**
	55.6% **5SW** u=2.50m	full **4SW**	full **3SW**	94.5% **2SW** u=0.35m	empty **1SW**

BOW

d=4.60m **d=3.90m**

6.5.1 Tide -40cm Phase 0

```
**********************************************************************************************************
*                                          *** MOSES ***                                                 *
*                                          ---------------                          1 July, 2025         *
*          T E C O N                                                        .                            *
*          ---------     Barge Configuration                                .                            *
*                                                                                                        *
**********************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                Process is DEFAULT: Units Are Degrees, Meters, and M-Tons Unless Specified

                                    Results Are Reported In Body System

                          Draft =     3.90 Roll Angle =     0.00 Pitch Angle =     0.45
```

```
                    Wet Radii Of Gyration About CG

                 K-X =     9.09 K-Y =    24.43 K-Z =    25.78

                    GMT =    13.85 GML =   154.87

                          /-- Center of Gravity ---/  Sounding   % Full
Name      Weight     ---X---  ---Y---  ---Z---  -------- --------

----------------  Part CF          ------------
LOAD_GRO     28.00    69.38    11.22     8.10
----------------  Part GRI&SF-B    ------------
LOAD_GRO     75.00    30.86    -1.14     7.35
----------------  Part GRI&SF-C    ------------
LOAD_GRO      0.50    67.44    11.22     7.10
----------------  Part GRI&SF-T    ------------
LOAD_GRO     45.00    65.20    -2.92     7.40
----------------  Part TP          ------------
LOAD_GRO    254.50    65.54    -2.14     9.35
----------------  Part VERVECE     ------------
LOAD_GRO   1832.80    47.02     0.00     3.52
--- Contents ---
1PC          229.92     5.63    -3.43     3.77     6.02    98.00
1PW           27.11     7.77   -10.27     0.99     1.65    11.54
1SC          230.42     5.63     3.43     3.77     6.02    98.00
1SW           25.95     7.80    10.26     0.96     1.60    11.04
2PC           17.47    21.70    -3.43     0.07     0.12     2.00
2PW          803.74    19.48   -10.28     2.81     5.61    92.00
2SC           17.47    21.70     3.43     0.07     0.12     2.00
2SW          825.58    19.48    10.28     2.88     5.76    94.50
3PC           17.47    42.27    -3.43     0.07     0.12     2.00
3PW          856.16    40.05   -10.28     2.99     5.97    98.00
3SC           17.47    42.27     3.43     0.07     0.12     2.00
3SW          856.16    40.05    10.28     2.99     5.97    98.00
4PC          262.11    60.73    -3.43     0.91     1.83    30.00
4PW          856.16    60.63   -10.28     2.99     5.97    98.00
4SC          262.11    60.73     3.43     0.91     1.83    30.00
4SW          856.16    60.63    10.28     2.99     5.97    98.00
5PC          353.09    83.64    -3.43     2.51     4.59    71.76
5PW          419.01    79.82   -10.28     1.82     3.46    52.80
5SC          352.72    83.66     3.43     2.54     4.64    72.83
5SW          441.23    79.89    10.28     1.91     3.62    55.60
========  ========  =======  =======  =======
Total       9963.29    48.08    -0.00     3.06
Buoyancy    9963.30    48.09    -0.00     2.20

*****************************************************************************************************
*                                        ***  MOSES   ***                                           *
*                                        ----------------                    1 July, 2025           *
*          T E C O N                                                .                                 *
*          ---------     Barge Configuration                                .                       *
*                                                                                                    *
*****************************************************************************************************

                           +++ D R A F T   M A R K   R E A D I N G S +++
                           ============================================

                Process is DEFAULT: Units Are Degrees, Meters, and M-Tons Unless Specified

   Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
 -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

  BOWPO        3.90 BOWST        3.90 MIDPO        4.26 MIDST        4.26 STEPO        4.62 STEST        4.62
```

6.5.2 Tide +40cm Phase 0

```
*****************************************************************************************************
*                                        ***  MOSES   ***                                           *
*                                        ----------------                    1 July, 2025           *
*          T E C O N                                                .                                 *
*          ---------     Barge Configuration                                .                       *
*                                                                                                    *
*****************************************************************************************************

                  +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                  ====================================================================

               Process is DEFAULT: Units Are Degrees, Meters, and M-Tons Unless Specified

                                Results Are Reported In Body System

                     Draft =     4.70 Roll Angle =    -0.00 Pitch Angle =    -0.44
```

```
                 Wet Radii Of Gyration About CG

          K-X =      9.23 K-Y =     25.35 K-Z =     26.40

                 GMT =     13.81 GML =    162.86

                    /-- Center of Gravity ---/  Sounding   % Full
Name      Weight    ---X---  ---Y---  ---Z---  -------- --------

----------------  Part CF          ------------
LOAD_GRO     28.00    69.38    11.22     8.10
----------------  Part GRI&SF-B   ------------
LOAD_GRO     75.00    30.86    -1.14     7.35
----------------  Part GRI&SF-C   ------------
LOAD_GRO      0.50    67.44    11.22     7.10
----------------  Part GRI&SF-T   ------------
LOAD_GRO     45.00    65.20    -2.92     7.40
----------------  Part TP          ------------
LOAD_GRO    254.50    65.54    -2.14     9.35
----------------  Part VERVECE     ------------
LOAD_GRO   1832.80    47.02     0.00     3.52
--- Contents ---
1PC         229.92     5.60    -3.43     3.77     6.02    98.00
1PW         234.98     5.60   -10.28     3.82     6.10   100.00
1SC         230.42     5.60     3.43     3.77     6.02    98.00
1SW         234.98     5.60    10.28     3.82     6.10   100.00
2PC          17.47    17.22    -3.43     0.07     0.12     2.00
2PW         803.74    19.38   -10.28     2.81     5.61    92.00
2SC          17.47    17.22     3.43     0.07     0.12     2.00
2SW         825.58    19.38    10.28     2.88     5.76    94.50
3PC          17.47    37.79    -3.43     0.07     0.12     2.00
3PW         856.16    39.96   -10.28     2.99     5.97    98.00
3SC          17.47    37.79     3.43     0.07     0.12     2.00
3SW         856.16    39.96    10.28     2.99     5.97    98.00
4PC         262.11    60.43    -3.43     0.91     1.83    30.00
4PW         856.16    60.53   -10.28     2.99     5.97    98.00
4SC         262.11    60.43     3.43     0.91     1.83    30.00
4SW         856.16    60.53    10.28     2.99     5.97    98.00
5PC         247.14    83.16    -3.43     1.86     3.43    50.23
5PW         419.01    79.64   -10.28     1.82     3.46    52.80
5SC         246.76    83.18     3.43     1.89     3.47    50.95
5SW         441.23    79.71    10.28     1.91     3.61    55.60
========  ========  =======  =======  =======
Total     10168.29    45.45     0.00     3.08
Buoyancy  10168.37    45.45     0.00     2.24
```

```
***************************************************************************************************************
*                                              ***  MOSES  ***                                                *
*                                              ----------------                          1 July, 2025         *
*          T E C O N                                                   .                                      *
*          ---------     Barge Configuration                                              .                   *
*                                                                                                             *
***************************************************************************************************************
```

```
                    +++ D R A F T   M A R K   R E A D I N G S +++
                    =============================================

          Process is DEFAULT: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
 -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

 BOWPO        4.70 BOWST        4.70 MIDPO        4.35 MIDST        4.35 STEPO        4.00 STEST        4.00
```

7 BARGE LONGITUDINAL STRUCTURAL CHECKS

The longitudinal strength analysis was carried out for the still water condition. The complete MOSES output is reported in section 9.

The allowable stresses were assumed as follows:

- Fy = 235 N/mm^2 yield stress
- σ_{all} = 0.66 x Fy = 155 N/mm^2
- τ_{all} = 0.4 x Fy = 94 N/mm^2

For normal stress, the maximum usage factor, i.e. the maximum bending / allowable stress ratio, is 0.46 in phase 11 of loadout operation.

- UF = 17351/26130 = 0.66

For shear stress, the maximum usage factor is:

- UF_{shear} = 863/6150 = 0.14

in phase 10 of loadout.

Values of BM and Shear along the longitudinal section of the cargo barge were compared with the admissible values shown in section 5.4. All the values are within allowable ones.

The maximum deflection results 5.26 cm (ph.11).

8 BARGE INTACT STABILITY – COMPLETE MOSES OUTPUT

In the following tables, the allowable deflection was conventionally set equal to unity, therefore the values indicated under the columns with heading Deflection / Allowable are actually the computed deflections.

```
                                  ********************************
*                                         ***  MOSES   ***                                                    *
*                                         ----------------                          1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                       *
*          ---------     Intact Stability Check    -- PHASE 0 ---------                                      *
*                                                                                                            *
**************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ======================================================================

                     Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

                                  Results Are Reported In Body System

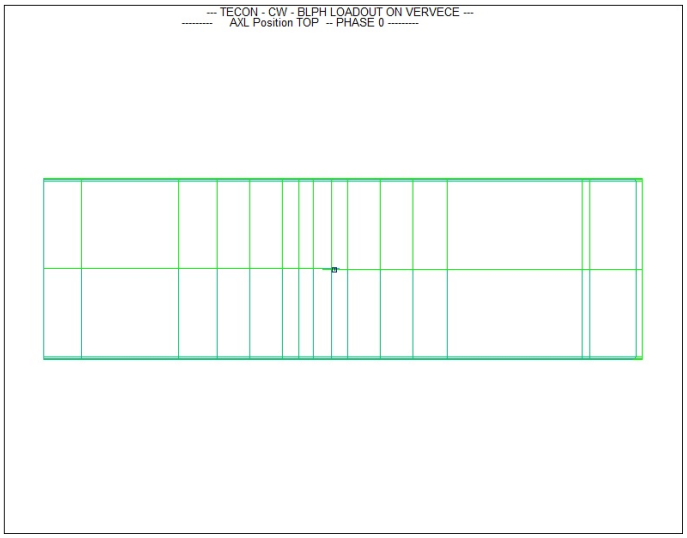
                         Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

                                  Wet Radii Of Gyration About CG

                                K-X =     9.14 K-Y =    24.73 K-Z =    25.94

                                        GMT =    14.07 GML =   160.56

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------
                                ----------------  Part CF          ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B    ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C    ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T    ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP          ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE     ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                            1PC         229.92     5.62    -3.43     3.77     6.02    98.00
                            1PW         117.49     6.50   -10.28     2.53     4.06    50.00
                            1SC         230.42     5.62     3.43     3.77     6.02    98.00
                            1SW         117.49     6.50    10.28     2.53     4.06    50.00
                            2PC          26.21    19.43    -3.43     0.09     0.18     3.00
                            2PW         802.16    19.43   -10.28     2.80     5.60    91.82
                            2SC          26.21    19.43     3.43     0.09     0.18     3.00
                            2SW         824.55    19.43    10.28     2.88     5.75    94.38
                            3PC          26.21    40.00    -3.43     0.09     0.18     3.00
                            3PW         856.16    40.01   -10.28     2.99     5.97    98.00
                            3SC          26.21    40.01     3.43     0.09     0.18     3.00
                            3SW         856.16    40.01    10.28     2.99     5.97    98.00
                            4PC         262.11    60.58    -3.43     0.91     1.83    30.00
                            4PW         856.16    60.58   -10.28     2.99     5.97    98.00
                            4SC         262.11    60.58     3.43     0.91     1.83    30.00
                            4SW         856.16    60.58    10.28     2.99     5.97    98.00
                            5PC         295.21    83.42    -3.43     2.16     3.96    60.00
                            5PW         416.68    79.73   -10.28     1.81     3.44    52.51
                            5SC         290.58    83.42     3.43     2.16     3.96    60.00
                            5SW         438.62    79.79    10.28     1.90     3.60    55.27
                                ========  ========  =======  =======  =======
                                Total     10052.62    46.75     0.00     3.03
                                Buoyancy  10052.62    46.75     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 0 ---------                                   *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 0 ---------             . *
*                                                                                    *
**********************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.62, KG = 3.03, and Wind Speed = 10 Knots

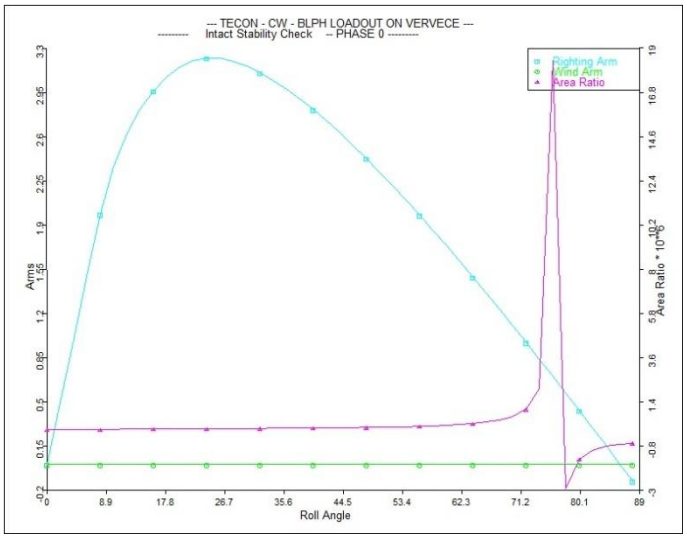
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	-0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.49	0.49	0.00	0.00	3076.04	0.492
4.29	4.00	0.00	9999.00	1.49	0.99	1.97	0.00	0.00	6329.47	0.989
4.27	6.00	0.00	9999.00	1.03	1.49	4.45	0.00	0.00	9950.45	1.488
4.25	8.00	0.00	9999.00	0.57	1.98	7.92	0.00	0.00	9999.00	1.984
4.26	10.00	0.00	9999.00	0.07	2.36	12.26	0.00	0.00	9999.00	2.358
4.31	12.00	0.00	9999.00	-0.46	2.62	17.24	0.00	0.00	9999.00	2.622
4.39	14.00	0.00	9999.00	-1.04	2.82	22.68	0.00	0.00	9999.00	2.816
4.48	16.00	0.00	9999.00	-1.63	2.96	28.46	0.00	0.00	9999.00	2.961
4.60	18.00	0.00	9999.00	-2.25	3.07	34.49	0.00	0.00	9999.00	3.071
4.72	20.00	0.00	9999.00	-2.88	3.15	40.71	0.00	0.00	9999.00	3.151
4.85	22.00	0.00	9999.00	-3.51	3.20	47.07	0.00	0.00	9999.00	3.202
4.97	24.00	0.00	9999.00	-4.14	3.22	53.49	0.00	0.00	9999.00	3.222
5.09	26.00	0.00	9999.00	-4.77	3.22	59.93	0.00	0.00	9999.00	3.218
5.20	28.00	0.00	9999.00	-5.39	3.19	66.35	0.00	0.00	9999.00	3.195
5.31	30.00	0.00	9999.00	-6.01	3.16	72.70	0.00	0.00	9999.00	3.156
5.41	32.00	0.00	9999.00	-6.62	3.11	78.96	0.00	0.00	9999.00	3.106
5.50	34.00	0.00	9999.00	-7.22	3.04	85.11	0.00	0.00	9999.00	3.045
5.58	36.00	0.00	9999.00	-7.81	2.97	91.13	-0.00	0.00	9999.00	2.975
5.66	38.00	0.00	9999.00	-8.39	2.90	97.00	-0.00	0.00	9999.00	2.897
5.73	40.00	0.00	9999.00	-8.96	2.81	102.71	-0.00	0.00	9999.00	2.814
5.80	42.00	0.00	9999.00	-9.52	2.72	108.25	-0.00	0.00	9999.00	2.724
5.86	44.00	0.00	9999.00	-10.07	2.63	113.60	-0.00	0.00	9999.00	2.629
5.91	46.00	0.00	9999.00	-10.61	2.53	118.76	-0.00	0.00	9999.00	2.530
5.95	48.00	0.00	9999.00	-11.13	2.43	123.72	-0.00	0.00	9999.00	2.426
5.99	50.00	0.00	9999.00	-11.64	2.32	128.46	-0.00	0.00	9999.00	2.318
6.02	52.00	0.00	9999.00	-12.14	2.21	132.99	-0.00	0.00	9999.00	2.208
6.04	54.00	0.00	9999.00	-12.62	2.09	137.29	-0.00	0.00	9999.00	2.094
6.05	56.00	0.00	9999.00	-13.08	1.98	141.36	-0.00	0.00	9999.00	1.977
6.06	58.00	0.00	9999.00	-13.53	1.86	145.19	-0.00	0.00	9999.00	1.858
6.06	60.00	0.00	9999.00	-13.97	1.74	148.79	-0.00	0.00	9999.00	1.736
6.05	62.00	0.00	9999.00	-14.38	1.61	152.14	-0.00	0.00	9999.00	1.613
6.03	64.00	0.00	9999.00	-14.78	1.49	155.24	-0.00	0.00	9999.00	1.487
6.01	66.00	0.00	9999.00	-15.16	1.36	158.08	-0.00	0.00	9999.00	1.360
5.98	68.00	0.00	9999.00	-15.53	1.23	160.67	-0.00	0.00	9999.00	1.231
5.94	70.00	0.00	9999.00	-15.87	1.10	163.00	-0.00	0.00	9999.00	1.101
5.90	72.00	0.00	9999.00	-16.19	0.97	165.07	-0.00	0.00	9999.00	0.969
5.85	74.00	0.00	9999.00	-16.50	0.84	166.88	-0.00	0.00	9999.00	0.836
5.79	76.00	0.00	9999.00	-16.78	0.70	168.41	-0.00	0.00	9999.00	0.701
5.72	78.00	0.00	9999.00	-17.05	0.57	169.68	-0.00	-0.00	-9999.00	0.565
5.65	80.00	0.00	9999.00	-17.29	0.43	170.68	-0.00	-0.00	-9999.00	0.429
5.57	82.00	0.00	9999.00	-17.51	0.29	171.39	-0.00	-0.00	-9999.00	0.291
5.48	84.00	0.00	9999.00	-17.71	0.15	171.84	-0.00	-0.00	-9999.00	0.152
5.39	86.00	0.00	9999.00	-17.89	0.01	172.00	-0.00	-0.00	-9999.00	0.012
5.29	88.00	0.00	9999.00	-18.05	-0.13	171.88	-0.00	-0.00	-9999.00	-0.131

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 0 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
8.9
17.8
26.7
35.6
44.5
53.4
62.3
71.2
80.1
89

```
                                    ******************************************************
        *                                       ***  MOSES   ***                                  *
        *                                       ----------------                  1 July, 2025    *
        *          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                    *
        *          ------ Wind Exposed Areas ------                                               *
        *                                                                                         *
        ***********************************************************************************************************

                          +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   C F +++
                          ========================================================================

                            Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

CF          28.00                                                                            69.38     11.22      8.10
                                              #WEI|010 #Weight


                                    ******************************************************
        *                                       ***  MOSES   ***                                  *
        *                                       ----------------                  1 July, 2025    *
        *          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                    *
        *          ------ Wind Exposed Areas ------                                               *
        *                                                                                         *
        ***********************************************************************************************************

                        +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   G R I & S F - B +++
                        ====================================================================================

                            Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

GRI&SF-B    75.00                                                                            30.86     -1.14      7.35
                                              #WEI|004 #Weight


                                    ******************************************************
        *                                       ***  MOSES   ***                                  *
        *                                       ----------------                  1 July, 2025    *
        *          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                    *
        *          ------ Wind Exposed Areas ------                                               *
        *                                                                                         *
        ***********************************************************************************************************

                        +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   G R I & S F - C +++
                        ====================================================================================

                            Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

GRI&SF-C     0.50                                                                            67.44     11.22      7.10
                                              #WEI|008 #Weight


                                    ******************************************************
        *                                       ***  MOSES   ***                                  *
        *                                       ----------------                  1 July, 2025    *
        *          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                    *
        *          ------ Wind Exposed Areas ------                                               *
        *                                                                                         *
        ***********************************************************************************************************

                        +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   G R I & S F - T +++
                        ====================================================================================

                            Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

GRI&SF-T    45.00                                                                            65.20     -2.92      7.40
                                              #WEI|006 #Weight


                                    ******************************************************
        *                                       ***  MOSES   ***                                  *
```

```
*                                                 ----------------                          1 July, 2025        *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                        *
*          ------ Wind Exposed Areas ------                                                                    *
*                                                                                                             *
***************************************************************************************************************

                    +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   T P +++
                    ========================================================================

                       Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

TP          254.50                                                                                  65.54     -2.14      9.35
                                                #WEI|012 #Weight


                                 ******************************************************
*                                    ***  MOSES   ***                                                       *
*                                    ----------------                          1 July, 2025        *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                        *
*          ------ Wind Exposed Areas ------                                                                    *
*                                                                                                             *
***************************************************************************************************************

                +++ L O A D   G R O U P   A T T R I B U T E S   F O R   P A R T   V E R V E C E +++
                ================================================================================

                       Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

 LOAD              CONT.            /---------- FACTOR ---------/ /----------- AREA ----------/ /--------- LOCATION --------/
  GROUP     WEIGHT    NAME      DISPL     WIND   ADD. MASS    DRAG        X         Y         Z         X         Y         Z
-------- --------- -------- --------- --------- --------- --------- --------- --------- --------- --------- --------- ---------

VERVECE    1832.80                                                                                  47.02      0.00      3.52
                                                #WEI|002 #Weight
```

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 0 ------   *
*                                                                                    *
**************************************************************************************************************
```

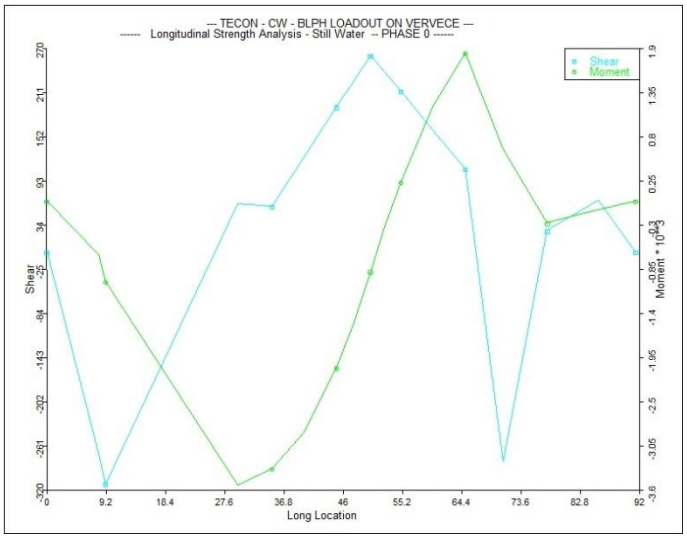
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 0: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-272	-670	-0.0265	2.6311
9.14	-311	-1003	-0.0397	2.9999
29.72	62	-3543	-0.1400	7.2611
35.00	59	-3334	-0.1318	7.3421
40.00	126	-2872	-0.1135	7.0434
45.00	192	-2078	-0.0821	6.4312
47.50	224	-1557	-0.0616	6.0332
50.29	260	-881	-0.0348	5.5393
52.50	238	-330	-0.0131	5.1260
55.00	213	233	0.0092	4.6497
60.00	161	1168	0.0462	3.7303
65.00	109	1843	0.0728	2.9369
70.87	-281	644	0.0254	2.2315
77.72	26	-276	-0.0109	1.5248
85.70	67	-108	-0.0043	0.6514
91.44	-1	0	0.0000	0.0001



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------                 1 July, 2025    *
*       --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                 *
*       ---------     Intact Stability Check    -- PHASE 1 ---------                *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                     Process is 1: Units Are Degrees, Meters, and M-Tons Unless Specified

                                   Results Are Reported In Body System

                         Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

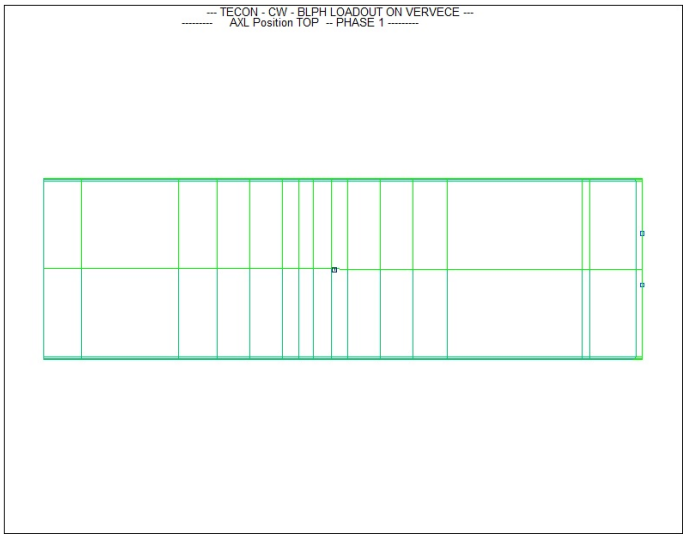
                                    Wet Radii Of Gyration About CG

                                K-X =     9.12 K-Y =    24.89 K-Z =    26.09

                                        GMT =    14.07 GML =   160.55

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL1       ------------
                                LOAD_GRO     51.10     0.01    -1.12     7.10
                                ----------------  Part CF         ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B   ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C   ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T   ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP         ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE    ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW      767.12    19.43   -10.28     2.68     5.35    87.81
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      792.25    19.43    10.28     2.77     5.53    90.69
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      856.16    40.01    10.28     2.99     5.97    98.00
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      423.41    79.75   -10.28     1.84     3.49    53.35
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      448.14    79.82    10.28     1.94     3.66    56.47
                                ========  ========  =======  =======  =======
                                Total     10052.61    46.75     0.00     3.04
                                Buoyancy  10052.62    46.75     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 1 ---------                                   *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 1: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
*********************************************************
*                                  ***  MOSES   ***                                    *
*                                  ----------------                 1 July, 2025      *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                 *
*         ---------     Intact Stability Check    -- PHASE 1 ---------               . *
*                                                                                      *
****************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 1: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.04, and Wind Speed = 10 Knots

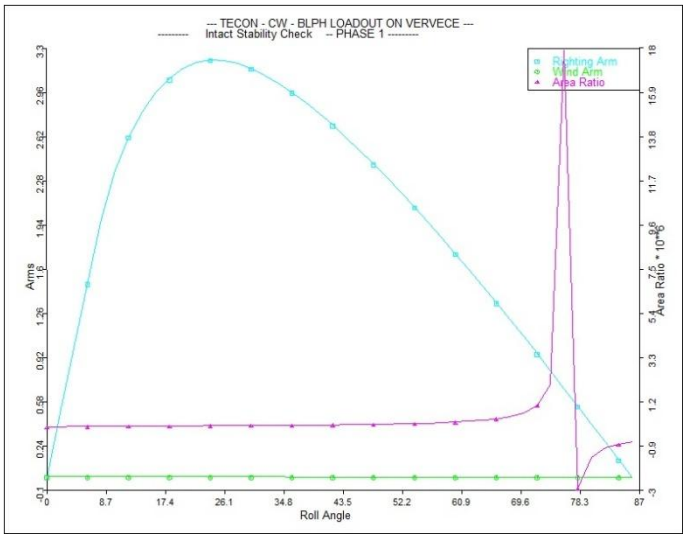
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	-0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.49	0.49	0.00	0.00	3074.93	0.492
4.29	4.00	0.00	9999.00	1.49	0.99	1.97	0.00	0.00	6327.19	0.988
4.27	6.00	0.00	9999.00	1.03	1.49	4.45	0.00	0.00	9946.86	1.488
4.25	8.00	0.00	9999.00	0.57	1.98	7.92	0.00	0.00	9999.00	1.982
4.26	10.00	0.00	9999.00	0.07	2.36	12.26	0.00	0.00	9999.00	2.356
4.31	12.00	0.00	9999.00	-0.46	2.62	17.23	0.00	0.00	9999.00	2.618
4.39	14.00	0.00	9999.00	-1.04	2.81	22.66	0.00	0.00	9999.00	2.810
4.48	16.00	0.00	9999.00	-1.63	2.95	28.42	0.00	0.00	9999.00	2.954
4.60	18.00	0.00	9999.00	-2.25	3.06	34.44	0.00	0.00	9999.00	3.062
4.72	20.00	0.00	9999.00	-2.88	3.14	40.64	0.00	0.00	9999.00	3.142
4.85	22.00	0.00	9999.00	-3.51	3.19	46.97	0.00	0.00	9999.00	3.192
4.97	24.00	0.00	9999.00	-4.14	3.21	53.38	0.00	0.00	9999.00	3.211
5.09	26.00	0.00	9999.00	-4.77	3.21	59.79	0.00	0.00	9999.00	3.206
5.20	28.00	0.00	9999.00	-5.39	3.18	66.18	0.00	0.00	9999.00	3.182
5.31	30.00	0.00	9999.00	-6.01	3.14	72.51	0.00	0.00	9999.00	3.143
5.41	32.00	0.00	9999.00	-6.62	3.09	78.74	0.00	0.00	9999.00	3.091
5.50	34.00	0.00	9999.00	-7.22	3.03	84.86	0.00	0.00	9999.00	3.030
5.58	36.00	0.00	9999.00	-7.81	2.96	90.85	-0.00	0.00	9999.00	2.960
5.66	38.00	0.00	9999.00	-8.39	2.88	96.69	-0.00	0.00	9999.00	2.882
5.73	40.00	0.00	9999.00	-8.96	2.80	102.37	-0.00	0.00	9999.00	2.798
5.80	42.00	0.00	9999.00	-9.52	2.71	107.88	-0.00	0.00	9999.00	2.708
5.86	44.00	0.00	9999.00	-10.07	2.61	113.20	-0.00	0.00	9999.00	2.613
5.91	46.00	0.00	9999.00	-10.61	2.51	118.32	-0.00	0.00	9999.00	2.513
5.95	48.00	0.00	9999.00	-11.13	2.41	123.25	-0.00	0.00	9999.00	2.409
5.99	50.00	0.00	9999.00	-11.64	2.30	127.96	-0.00	0.00	9999.00	2.301
6.02	52.00	0.00	9999.00	-12.14	2.19	132.45	-0.00	0.00	9999.00	2.190
6.04	54.00	0.00	9999.00	-12.62	2.08	136.71	-0.00	0.00	9999.00	2.076
6.05	56.00	0.00	9999.00	-13.08	1.96	140.75	-0.00	0.00	9999.00	1.959
6.06	58.00	0.00	9999.00	-13.53	1.84	144.55	-0.00	0.00	9999.00	1.839
6.06	60.00	0.00	9999.00	-13.97	1.72	148.10	-0.00	0.00	9999.00	1.718
6.05	62.00	0.00	9999.00	-14.38	1.59	151.42	-0.00	0.00	9999.00	1.594
6.03	64.00	0.00	9999.00	-14.78	1.47	154.48	-0.00	0.00	9999.00	1.468
6.01	66.00	0.00	9999.00	-15.16	1.34	157.29	-0.00	0.00	9999.00	1.340
5.98	68.00	0.00	9999.00	-15.53	1.21	159.84	-0.00	0.00	9999.00	1.211
5.94	70.00	0.00	9999.00	-15.87	1.08	162.13	-0.00	0.00	9999.00	1.080
5.90	72.00	0.00	9999.00	-16.19	0.95	164.16	-0.00	0.00	9999.00	0.948
5.85	74.00	0.00	9999.00	-16.50	0.81	165.92	-0.00	0.00	9999.00	0.814
5.79	76.00	0.00	9999.00	-16.78	0.68	167.41	-0.00	0.00	9999.00	0.679
5.72	78.00	0.00	9999.00	-17.05	0.54	168.63	-0.00	-0.00	-9999.00	0.543
5.65	80.00	0.00	9999.00	-17.29	0.41	169.58	-0.00	-0.00	-9999.00	0.405
5.57	82.00	0.00	9999.00	-17.51	0.27	170.25	-0.00	-0.00	-9999.00	0.268
5.48	84.00	0.00	9999.00	-17.71	0.13	170.65	-0.00	-0.00	-9999.00	0.129
5.39	86.00	0.00	9999.00	-17.89	-0.01	170.77	-0.00	-0.00	-9999.00	-0.010

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 1 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
8.7
17.4
26.1
34.8
43.5
52.2
60.9
69.6
78.3
87

```
*                                                                                                                      *
*                                        ***  MOSES    ***                                                          *
*                                        ----------------                                  1 July, 2025              *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                               *
*          ------   Longitudinal Strength Analysis - Still Water  -- PHASE 1 ------                                  *
*                                                                                                                      *
**************************************************************************************************************************

                        +++ L O N G I T U D I N A L   S T R E N G T H   R E S U L T S +++
                        ================================================================

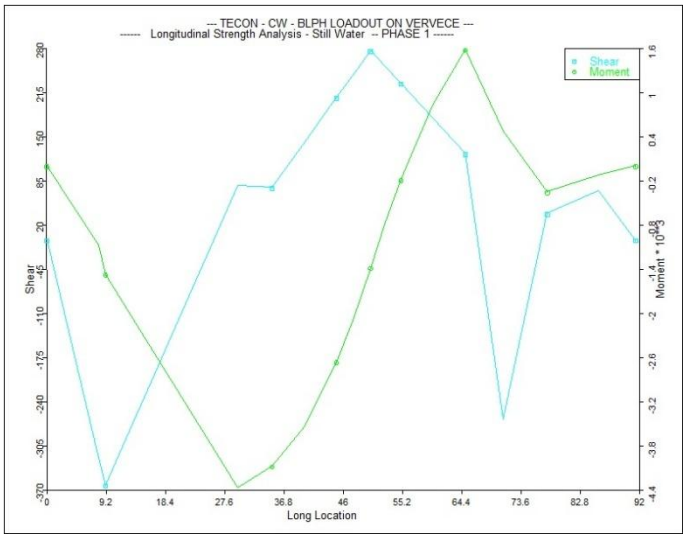
                    Process is 1: Units Are Degrees, Meters, and M-Tons Unless Specified

                                      Allowable Stress =     155.00 Mpa

                                   Allowable Deflection =       1.00 MM

      Longitudinal        Shear          Bending         B. Stress/     Deflection/
        Location          Force           Moment         Allowable      Allowable
     --------------  --------------  --------------  --------------  --------------

           0.00             -1               0          0.0000          0.0000
           8.00           -323           -1079         -0.0427          3.4801
           9.14           -362           -1470         -0.0581          3.9636
          29.72             79           -4371         -0.1727          9.6085
          35.00             75           -4077         -0.1611          9.7985
          40.00            142           -3534         -0.1397          9.5187
          45.00            208           -2659         -0.1051          8.8523
          47.50            240           -2099         -0.0830          8.4028
          50.29            277           -1377         -0.0545          7.8334
          52.50            254            -791         -0.0313          7.3484
          55.00            229            -187         -0.0074          6.7791
          60.00            177             828          0.0327          5.6396
          65.00            125            1583          0.0626          4.5889
          70.87           -265             478          0.0189          3.5457
          77.72             37            -349         -0.0138          2.4130
          85.70             71            -121         -0.0048          1.0250
          91.44             -1               0          0.0000          0.0001
```



```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 2 ---------                              *
*                                                                                                    *
******************************************************************************************************************

                +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                ======================================================================

                 Process is 2: Units Are Degrees, Meters, and M-Tons Unless Specified

                              Results Are Reported In Body System

                     Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

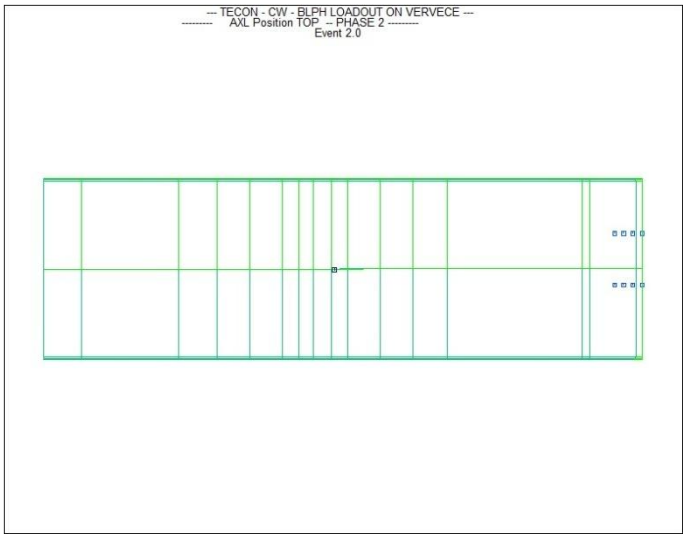
                                 Wet Radii Of Gyration About CG

                           K-X =     9.06 K-Y =    25.29 K-Z =    26.44

                                    GMT =    14.04 GML =   160.51

                           /-- Center of Gravity ---/  Sounding   % Full
                    Name    Weight    ---X---  ---Y---  ---Z---  -------- --------

                           ----------------  Part AXL2       ------------
                           LOAD_GRO    204.40     2.11    -1.12     7.10
                           ----------------  Part CF         ------------
                           LOAD_GRO     28.00    69.38    11.22     8.10
                           ----------------  Part GRI&SF-B   ------------
                           LOAD_GRO     75.00    30.86    -1.14     7.35
                           ----------------  Part GRI&SF-C   ------------
                           LOAD_GRO      0.50    67.44    11.22     7.10
                           ----------------  Part GRI&SF-T   ------------
                           LOAD_GRO     45.00    65.20    -2.92     7.40
                           ----------------  Part TP         ------------
                           LOAD_GRO    254.50    65.54    -2.14     9.35
                           ----------------  Part VERVECE    ------------
                           LOAD_GRO   1832.80    47.02     0.00     3.52
                                        --- Contents ---
                      1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                      1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                      1SC      230.42     5.62     3.43     3.77     6.02    98.00
                      1SW      117.49     6.50    10.28     2.53     4.06    50.00
                      2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                      2PW      665.41    19.43   -10.28     2.33     4.64    76.17
                      2SC       26.21    19.43     3.43     0.09     0.18     3.00
                      2SW      698.81    19.43    10.28     2.44     4.88    79.99
                      3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                      3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                      3SC       26.21    40.01     3.43     0.09     0.18     3.00
                      3SW      856.16    40.01    10.28     2.99     5.97    98.00
                      4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                      4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                      4SC      262.11    60.58     3.43     0.91     1.83    30.00
                      4SW      856.16    60.58    10.28     2.99     5.97    98.00
                      5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                      5PW      440.15    79.80   -10.28     1.90     3.61    55.46
                      5SC      290.58    83.42     3.43     2.16     3.96    60.00
                      5SW      473.25    79.89    10.28     2.03     3.84    59.64
                           ========  ========  =======  =======  =======
                           Total     10052.61    46.76     0.00     3.06
                           Buoyancy  10052.62    46.76     0.00     2.21
```




```
                    ********************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 2 ---------                              *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 2: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
*********************************************************
*                                  ***  MOSES   ***                                    *
*                                  -----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*         ---------     Intact Stability Check    -- PHASE 2 ---------              . *
*                                                                                     *
***************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 2: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.06, and Wind Speed = 10 Knots

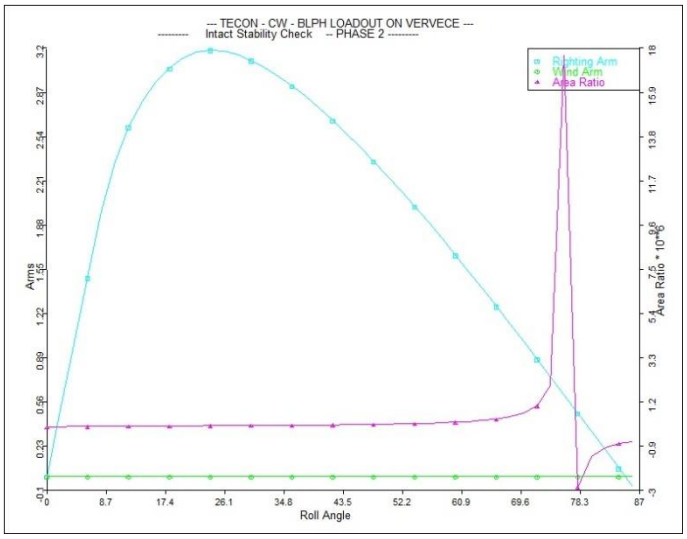
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.49	0.49	0.00	0.00	3069.38	0.491
4.29	4.00	0.00	9999.00	1.48	0.99	1.97	0.00	0.00	6315.79	0.986
4.27	6.00	0.00	9999.00	1.03	1.49	4.44	0.00	0.00	9929.01	1.485
4.25	8.00	0.00	9999.00	0.57	1.98	7.90	0.00	0.00	9999.00	1.979
4.26	10.00	0.00	9999.00	0.07	2.35	12.23	0.00	0.00	9999.00	2.351
4.31	12.00	0.00	9999.00	-0.47	2.61	17.20	0.00	0.00	9999.00	2.612
4.39	14.00	0.00	9999.00	-1.04	2.80	22.61	0.00	0.00	9999.00	2.802
4.48	16.00	0.00	9999.00	-1.63	2.94	28.36	0.00	0.00	9999.00	2.943
4.60	18.00	0.00	9999.00	-2.25	3.05	34.35	0.00	0.00	9999.00	3.049
4.72	20.00	0.00	9999.00	-2.88	3.13	40.52	0.00	0.00	9999.00	3.125
4.85	22.00	0.00	9999.00	-3.51	3.17	46.82	0.00	0.00	9999.00	3.171
4.97	24.00	0.00	9999.00	-4.15	3.19	53.18	0.00	0.00	9999.00	3.187
5.09	26.00	0.00	9999.00	-4.77	3.18	59.54	0.00	0.00	9999.00	3.179
5.20	28.00	0.00	9999.00	-5.40	3.15	65.87	0.00	0.00	9999.00	3.151
5.31	30.00	0.00	9999.00	-6.01	3.11	72.13	0.00	0.00	9999.00	3.109
5.41	32.00	0.00	9999.00	-6.62	3.06	78.30	0.00	0.00	9999.00	3.055
5.50	34.00	0.00	9999.00	-7.22	2.99	84.35	0.00	0.00	9999.00	2.991
5.58	36.00	0.00	9999.00	-7.81	2.92	90.25	-0.00	0.00	9999.00	2.918
5.66	38.00	0.00	9999.00	-8.39	2.84	96.01	-0.00	0.00	9999.00	2.839
5.73	40.00	0.00	9999.00	-8.96	2.75	101.60	-0.00	0.00	9999.00	2.753
5.80	42.00	0.00	9999.00	-9.52	2.66	107.02	-0.00	0.00	9999.00	2.662
5.86	44.00	0.00	9999.00	-10.07	2.56	112.24	-0.00	0.00	9999.00	2.565
5.91	46.00	0.00	9999.00	-10.61	2.46	117.27	-0.00	0.00	9999.00	2.464
5.95	48.00	0.00	9999.00	-11.13	2.36	122.09	-0.00	0.00	9999.00	2.358
5.99	50.00	0.00	9999.00	-11.64	2.25	126.70	-0.00	0.00	9999.00	2.248
6.01	52.00	0.00	9999.00	-12.14	2.14	131.08	-0.00	0.00	9999.00	2.135
6.04	54.00	0.00	9999.00	-12.62	2.02	135.24	-0.00	0.00	9999.00	2.019
6.05	56.00	0.00	9999.00	-13.09	1.90	139.16	-0.00	0.00	9999.00	1.900
6.06	58.00	0.00	9999.00	-13.53	1.78	142.84	-0.00	0.00	9999.00	1.779
6.06	60.00	0.00	9999.00	-13.97	1.66	146.27	-0.00	0.00	9999.00	1.655
6.05	62.00	0.00	9999.00	-14.38	1.53	149.46	-0.00	0.00	9999.00	1.529
6.03	64.00	0.00	9999.00	-14.78	1.40	152.39	-0.00	0.00	9999.00	1.402
6.01	66.00	0.00	9999.00	-15.16	1.27	155.06	-0.00	0.00	9999.00	1.273
5.98	68.00	0.00	9999.00	-15.53	1.14	157.48	-0.00	0.00	9999.00	1.142
5.94	70.00	0.00	9999.00	-15.87	1.01	159.63	-0.00	0.00	9999.00	1.010
5.90	72.00	0.00	9999.00	-16.19	0.88	161.51	-0.00	0.00	9999.00	0.877
5.85	74.00	0.00	9999.00	-16.50	0.74	163.13	-0.00	0.00	9999.00	0.743
5.79	76.00	0.00	9999.00	-16.78	0.61	164.49	-0.00	0.00	9999.00	0.608
5.72	78.00	0.00	9999.00	-17.05	0.47	165.57	-0.00	-0.00	-9999.00	0.473
5.65	80.00	0.00	9999.00	-17.29	0.34	166.38	-0.00	-0.00	-9999.00	0.337
5.57	82.00	0.00	9999.00	-17.51	0.20	166.91	-0.00	-0.00	-9999.00	0.200
5.48	84.00	0.00	9999.00	-17.71	0.06	167.18	-0.00	-0.00	-9999.00	0.063
5.39	86.00	0.00	9999.00	-17.89	-0.08	167.16	-0.00	-0.00	-9999.00	-0.076

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 2
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
8.7
17.4
26.1
34.8
43.5
52.2
60.9
69.6
78.3
87

```
*******************************************************
*                                *** MOSES ***                                *
*                                ----------------          1 July, 2025       *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                          *
*        ------  Longitudinal Strength Analysis - Still Water  -- PHASE 2 ------*
*                                                                              *
********************************************************************************************************************
```

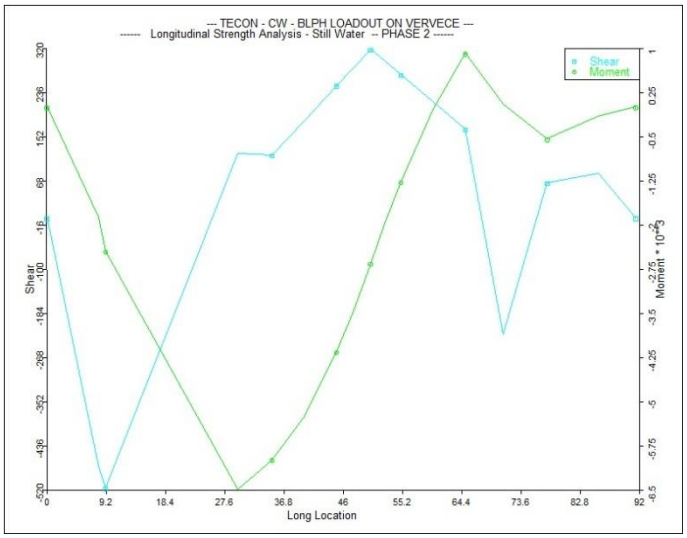
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 2: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-476	-1876	-0.0742	5.5694
9.14	-516	-2442	-0.0965	6.3410
29.72	120	-6496	-0.2567	15.5395
35.00	116	-5984	-0.2365	16.0183
40.00	183	-5235	-0.2069	15.7953
45.00	249	-4154	-0.1642	14.9983
47.50	282	-3490	-0.1380	14.4202
50.29	318	-2653	-0.1049	13.6620
52.50	296	-1976	-0.0781	12.9965
55.00	270	-1269	-0.0502	12.1921
60.00	219	-47	-0.0019	10.4958
65.00	166	915	0.0362	8.7920
70.87	-223	53	0.0021	6.8902
77.72	64	-538	-0.0213	4.6737
85.70	82	-154	-0.0061	1.9761
91.44	-1	0	0.0000	0.0001



```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 3 ---------                              *
*                                                                                                    *
******************************************************************************************************

                +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                ======================================================================

                 Process is 3: Units Are Degrees, Meters, and M-Tons Unless Specified

                              Results Are Reported In Body System

                     Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

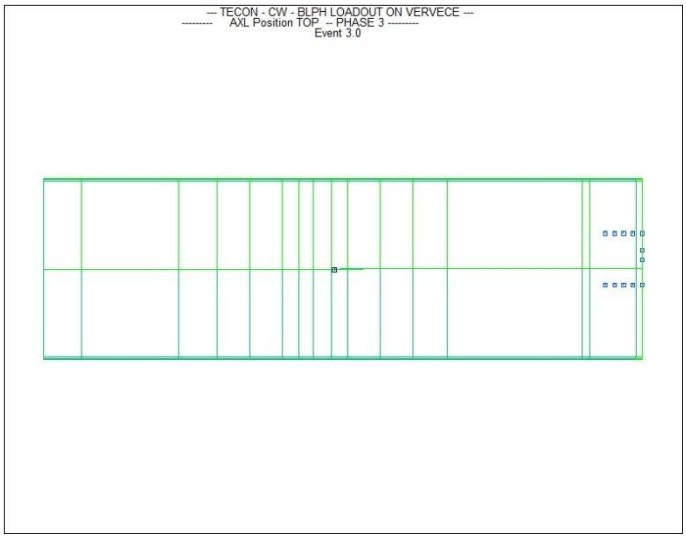
                                 Wet Radii Of Gyration About CG

                           K-X =     9.03 K-Y =    25.48 K-Z =    26.60

                                    GMT =    14.02 GML =   160.53

                           /-- Center of Gravity ---/  Sounding   % Full
                    Name    Weight    ---X---  ---Y---  ---Z---  -------- --------

                           ----------------  Part AXL3       ------------
                           LOAD_GRO    281.05     2.56    -1.21     7.10
                           ----------------  Part CF         ------------
                           LOAD_GRO     28.00    69.38    11.22     8.10
                           ----------------  Part GRI&SF-B   ------------
                           LOAD_GRO     75.00    30.86    -1.14     7.35
                           ----------------  Part GRI&SF-C   ------------
                           LOAD_GRO      0.50    67.44    11.22     7.10
                           ----------------  Part GRI&SF-T   ------------
                           LOAD_GRO     45.00    65.20    -2.92     7.40
                           ----------------  Part TP         ------------
                           LOAD_GRO    254.50    65.54    -2.14     9.35
                           ----------------  Part VERVECE    ------------
                           LOAD_GRO   1832.80    47.02     0.00     3.52
                                        --- Contents ---
                      1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                      1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                      1SC      230.42     5.62     3.43     3.77     6.02    98.00
                      1SW      117.49     6.50    10.28     2.53     4.06    50.00
                      2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                      2PW      614.89    19.43   -10.28     2.15     4.29    70.38
                      2SC       26.21    19.43     3.43     0.09     0.18     3.00
                      2SW      653.71    19.43    10.28     2.28     4.56    74.83
                      3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                      3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                      3SC       26.21    40.01     3.43     0.09     0.18     3.00
                      3SW      856.16    40.01    10.28     2.99     5.97    98.00
                      4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                      4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                      4SC      262.11    60.58     3.43     0.91     1.83    30.00
                      4SW      856.16    60.58    10.28     2.99     5.97    98.00
                      5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                      5PW      446.91    79.82   -10.28     1.93     3.66    56.32
                      5SC      290.58    83.42     3.43     2.16     3.96    60.00
                      5SW      485.46    79.92    10.28     2.08     3.93    61.17
                           ========  ========  =======  =======  =======
                           Total     10052.61    46.75     0.00     3.08
                           Buoyancy  10052.62    46.75     0.00     2.21
```




```
                    ********************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 3 ---------                              *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          =============================================

                Process is 3: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
*********************************************************
*                                  ***  MOSES   ***                                    *
*                                  -----------------                  1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                  *
*        ---------     Intact Stability Check    -- PHASE 3 ---------                 . *
*                                                                                      *
****************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 3: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.08, and Wind Speed = 10 Knots

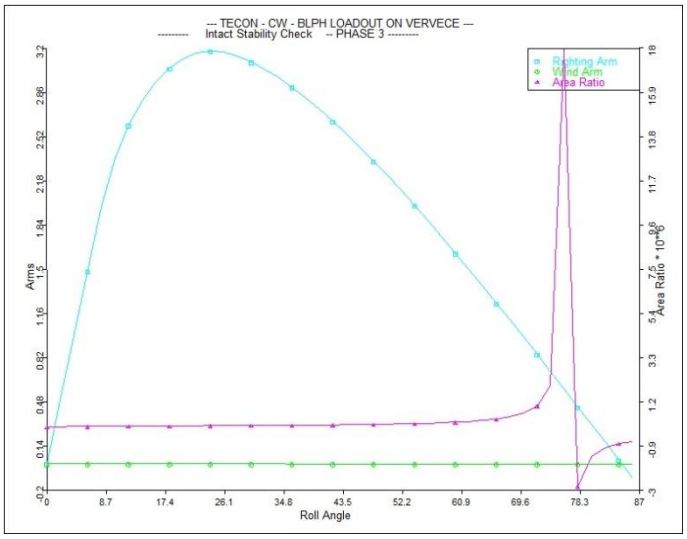
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.49	0.49	0.00	0.00	3065.60	0.490
4.29	4.00	0.00	9999.00	1.49	0.99	1.97	0.00	0.00	6308.02	0.985
4.27	6.00	0.00	9999.00	1.03	1.48	4.43	0.00	0.00	9916.80	1.483
4.25	8.00	0.00	9999.00	0.57	1.98	7.89	0.00	0.00	9999.00	1.976
4.26	10.00	0.00	9999.00	0.07	2.35	12.22	0.00	0.00	9999.00	2.348
4.31	12.00	0.00	9999.00	-0.46	2.61	17.18	0.00	0.00	9999.00	2.609
4.39	14.00	0.00	9999.00	-1.04	2.80	22.58	0.00	0.00	9999.00	2.798
4.48	16.00	0.00	9999.00	-1.63	2.94	28.32	0.00	0.00	9999.00	2.939
4.60	18.00	0.00	9999.00	-2.25	3.04	34.30	0.00	0.00	9999.00	3.043
4.72	20.00	0.00	9999.00	-2.88	3.12	40.46	0.00	0.00	9999.00	3.119
4.85	22.00	0.00	9999.00	-3.51	3.16	46.75	0.00	0.00	9999.00	3.164
4.97	24.00	0.00	9999.00	-4.14	3.18	53.09	0.00	0.00	9999.00	3.179
5.09	26.00	0.00	9999.00	-4.77	3.17	59.44	0.00	0.00	9999.00	3.169
5.20	28.00	0.00	9999.00	-5.39	3.14	65.75	0.00	0.00	9999.00	3.140
5.31	30.00	0.00	9999.00	-6.01	3.10	71.98	0.00	0.00	9999.00	3.096
5.41	32.00	0.00	9999.00	-6.62	3.04	78.12	0.00	0.00	9999.00	3.040
5.50	34.00	0.00	9999.00	-7.22	2.97	84.13	0.00	0.00	9999.00	2.974
5.58	36.00	0.00	9999.00	-7.81	2.90	90.00	-0.00	0.00	9999.00	2.900
5.66	38.00	0.00	9999.00	-8.39	2.82	95.72	-0.00	0.00	9999.00	2.819
5.73	40.00	0.00	9999.00	-8.96	2.73	101.27	-0.00	0.00	9999.00	2.732
5.80	42.00	0.00	9999.00	-9.52	2.64	106.64	-0.00	0.00	9999.00	2.639
5.86	44.00	0.00	9999.00	-10.07	2.54	111.82	-0.00	0.00	9999.00	2.541
5.91	46.00	0.00	9999.00	-10.61	2.44	116.80	-0.00	0.00	9999.00	2.439
5.95	48.00	0.00	9999.00	-11.13	2.33	121.57	-0.00	0.00	9999.00	2.332
5.99	50.00	0.00	9999.00	-11.64	2.22	126.13	-0.00	0.00	9999.00	2.221
6.02	52.00	0.00	9999.00	-12.14	2.11	130.45	-0.00	0.00	9999.00	2.107
6.04	54.00	0.00	9999.00	-12.62	1.99	134.55	-0.00	0.00	9999.00	1.989
6.05	56.00	0.00	9999.00	-13.08	1.87	138.41	-0.00	0.00	9999.00	1.869
6.06	58.00	0.00	9999.00	-13.53	1.75	142.02	-0.00	0.00	9999.00	1.746
6.06	60.00	0.00	9999.00	-13.97	1.62	145.39	-0.00	0.00	9999.00	1.622
6.05	62.00	0.00	9999.00	-14.38	1.50	148.51	-0.00	0.00	9999.00	1.495
6.03	64.00	0.00	9999.00	-14.78	1.37	151.37	-0.00	0.00	9999.00	1.367
6.01	66.00	0.00	9999.00	-15.16	1.24	153.98	-0.00	0.00	9999.00	1.238
5.98	68.00	0.00	9999.00	-15.53	1.11	156.32	-0.00	0.00	9999.00	1.107
5.94	70.00	0.00	9999.00	-15.87	0.98	158.40	-0.00	0.00	9999.00	0.976
5.90	72.00	0.00	9999.00	-16.19	0.84	160.22	-0.00	0.00	9999.00	0.843
5.85	74.00	0.00	9999.00	-16.50	0.71	161.77	-0.00	0.00	9999.00	0.709
5.79	76.00	0.00	9999.00	-16.78	0.57	163.06	-0.00	0.00	9999.00	0.574
5.72	78.00	0.00	9999.00	-17.05	0.44	164.07	-0.00	-0.00	-9999.00	0.439
5.65	80.00	0.00	9999.00	-17.29	0.30	164.81	-0.00	-0.00	-9999.00	0.303
5.57	82.00	0.00	9999.00	-17.51	0.17	165.28	-0.00	-0.00	-9999.00	0.167
5.48	84.00	0.00	9999.00	-17.71	0.03	165.48	-0.00	-0.00	-9999.00	0.030
5.39	86.00	0.00	9999.00	-17.89	-0.11	165.40	-0.00	-0.00	-9999.00	-0.108

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                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ------   Longitudinal Strength Analysis - Still Water  -- PHASE 3 ------                  *
*                                                                                                     *
*******************************************************************************************************

                  +++ L O N G I T U D I N A L   S T R E N G T H   R E S U L T S +++
                  ================================================================

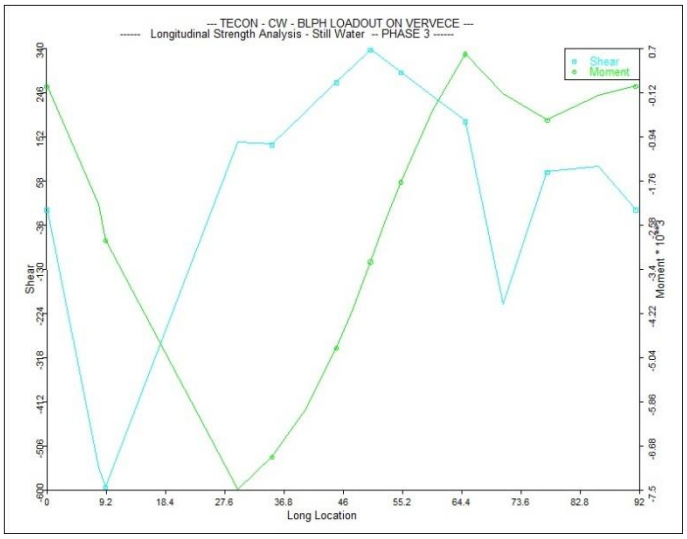
              Process is 3: Units Are Degrees, Meters, and M-Tons Unless Specified

                                Allowable Stress =     155.00 Mpa

                              Allowable Deflection =       1.00 MM

      Longitudinal       Shear          Bending         B. Stress/     Deflection/
        Location         Force           Moment         Allowable      Allowable
     --------------  --------------  --------------  --------------  --------------

           0.00            -1              0          0.0000          0.0000
           8.00          -553          -2201          -0.0870          6.5372
           9.14          -592          -2855          -0.1129          7.4427
          29.72           139          -7496          -0.2962         18.3093
          35.00           136          -6881          -0.2720         18.9251
          40.00           203          -6034          -0.2385         18.7298
          45.00           269          -4856          -0.1919         17.8722
          47.50           301          -4144          -0.1638         17.2342
          50.29           337          -3252          -0.1285         16.3879
          52.50           315          -2532          -0.1001         15.6381
          55.00           290          -1776          -0.0702         14.7239
          60.00           238           -456          -0.0181         12.7673
          65.00           186            602           0.0238         10.7578
          70.87          -204           -145          -0.0058          8.4545
          77.72            77           -626          -0.0248          5.7311
          85.70            88           -169          -0.0067          2.4210
          91.44            -1              0          0.0000          0.0001
```


--- TECON - CW - BLPH LOADOUT ON VERVECE ---
------ Longitudinal Strength Analysis - Still Water -- PHASE 3 ------
Shear
Moment
Shear
Moment * 10^3
Long Location
0
9.2
18.4
27.6
36.8
46
55.2
64.4
73.6
82.8
92

```
*                                                                                                                      *
*                                        ***  MOSES   ***                                                          *
*                                        ----------------                                  1 July, 2025         *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                             *
*          ---------     Intact Stability Check    -- PHASE 4 ---------                                            *
*                                                                                                                      *
**********************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                     Process is 4: Units Are Degrees, Meters, and M-Tons Unless Specified

                                   Results Are Reported In Body System

                        Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

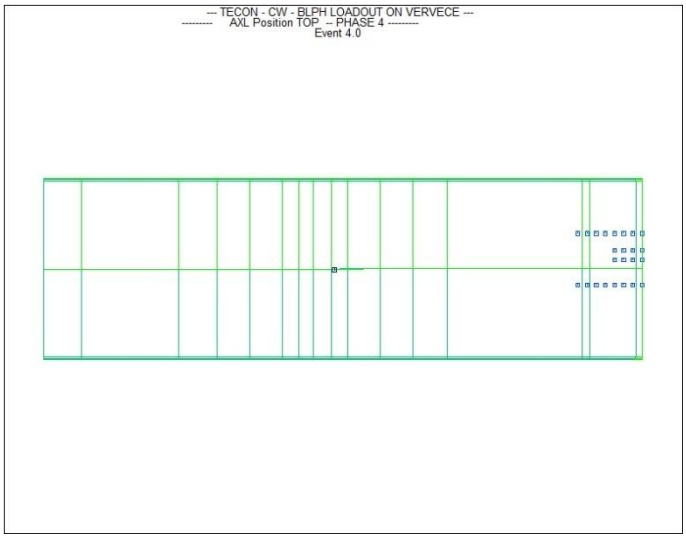
                                     Wet Radii Of Gyration About CG

                                K-X =     8.93 K-Y =    25.92 K-Z =    26.98

                                        GMT =    13.95 GML =   160.50

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL4        ------------
                                LOAD_GRO    511.00     4.35    -1.32     7.10
                                ----------------  Part CF          ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B    ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C    ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T    ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP          ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE     ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW      467.52    19.43   -10.28     1.64     3.27    53.51
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      522.52    19.43    10.28     1.83     3.65    59.81
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      856.16    40.01    10.28     2.99     5.97    98.00
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      463.00    79.86   -10.28     1.99     3.77    58.34
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      517.98    80.00    10.28     2.20     4.16    65.27
                                ========  ========  =======  =======  =======
                                Total     10052.61    46.76     0.00     3.15
                                Buoyancy  10052.62    46.76     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 4 ---------                                   *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                    Process is 4: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
*********************************************************
*                                  ***  MOSES   ***                                    *
*                                  ----------------                 1 July, 2025      *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                 *
*         ---------     Intact Stability Check    -- PHASE 4 ---------               . *
*                                                                                      *
****************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 4: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.15, and Wind Speed = 10 Knots

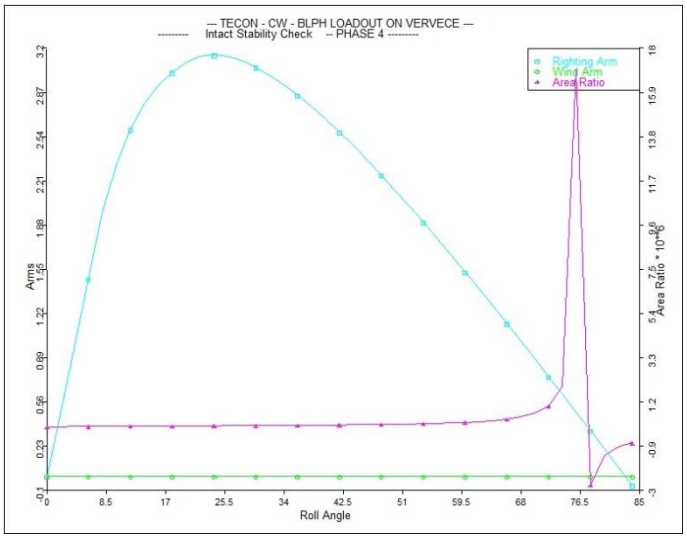
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.29	2.00	0.00	9999.00	1.94	0.49	0.49	0.00	0.00	3049.69	0.488
4.29	4.00	0.00	9999.00	1.48	0.98	1.96	0.00	0.00	6275.34	0.980
4.27	6.00	0.00	9999.00	1.03	1.48	4.41	0.00	0.00	9865.57	1.476
4.25	8.00	0.00	9999.00	0.57	1.97	7.85	0.00	0.00	9999.00	1.966
4.26	10.00	0.00	9999.00	0.07	2.34	12.16	0.00	0.00	9999.00	2.335
4.31	12.00	0.00	9999.00	-0.47	2.59	17.08	0.00	0.00	9999.00	2.593
4.39	14.00	0.00	9999.00	-1.04	2.78	22.46	0.00	0.00	9999.00	2.780
4.48	16.00	0.00	9999.00	-1.63	2.92	28.16	0.00	0.00	9999.00	2.918
4.60	18.00	0.00	9999.00	-2.25	3.02	34.10	0.00	0.00	9999.00	3.021
4.72	20.00	0.00	9999.00	-2.88	3.09	40.21	0.00	0.00	9999.00	3.094
4.85	22.00	0.00	9999.00	-3.51	3.14	46.44	0.00	0.00	9999.00	3.137
4.97	24.00	0.00	9999.00	-4.15	3.15	52.73	0.00	0.00	9999.00	3.149
5.09	26.00	0.00	9999.00	-4.77	3.14	59.01	0.00	0.00	9999.00	3.136
5.20	28.00	0.00	9999.00	-5.40	3.10	65.25	0.00	0.00	9999.00	3.105
5.31	30.00	0.00	9999.00	-6.01	3.06	71.42	0.00	0.00	9999.00	3.057
5.41	32.00	0.00	9999.00	-6.62	3.00	77.47	0.00	0.00	9999.00	2.998
5.50	34.00	0.00	9999.00	-7.22	2.93	83.40	0.00	0.00	9999.00	2.928
5.58	36.00	0.00	9999.00	-7.81	2.85	89.17	-0.00	0.00	9999.00	2.849
5.66	38.00	0.00	9999.00	-8.39	2.76	94.79	-0.00	0.00	9999.00	2.764
5.73	40.00	0.00	9999.00	-8.96	2.67	100.22	-0.00	0.00	9999.00	2.672
5.80	42.00	0.00	9999.00	-9.52	2.57	105.47	-0.00	0.00	9999.00	2.574
5.86	44.00	0.00	9999.00	-10.07	2.47	110.51	-0.00	0.00	9999.00	2.471
5.91	46.00	0.00	9999.00	-10.61	2.36	115.35	-0.00	0.00	9999.00	2.364
5.95	48.00	0.00	9999.00	-11.13	2.25	119.97	-0.00	0.00	9999.00	2.253
5.99	50.00	0.00	9999.00	-11.64	2.14	124.36	-0.00	0.00	9999.00	2.139
6.01	52.00	0.00	9999.00	-12.14	2.02	128.52	-0.00	0.00	9999.00	2.021
6.04	54.00	0.00	9999.00	-12.62	1.90	132.44	-0.00	0.00	9999.00	1.902
6.05	56.00	0.00	9999.00	-13.09	1.78	136.12	-0.00	0.00	9999.00	1.779
6.06	58.00	0.00	9999.00	-13.54	1.65	139.56	-0.00	0.00	9999.00	1.655
6.06	60.00	0.00	9999.00	-13.97	1.53	142.74	-0.00	0.00	9999.00	1.529
6.05	62.00	0.00	9999.00	-14.38	1.40	145.67	-0.00	0.00	9999.00	1.402
6.03	64.00	0.00	9999.00	-14.78	1.27	148.34	-0.00	0.00	9999.00	1.273
6.01	66.00	0.00	9999.00	-15.16	1.14	150.76	-0.00	0.00	9999.00	1.143
5.98	68.00	0.00	9999.00	-15.53	1.01	152.92	-0.00	0.00	9999.00	1.012
5.94	70.00	0.00	9999.00	-15.87	0.88	154.81	-0.00	0.00	9999.00	0.880
5.90	72.00	0.00	9999.00	-16.19	0.75	156.43	-0.00	0.00	9999.00	0.746
5.85	74.00	0.00	9999.00	-16.50	0.61	157.79	-0.00	0.00	9999.00	0.612
5.79	76.00	0.00	9999.00	-16.78	0.48	158.88	-0.00	0.00	9999.00	0.478
5.72	78.00	0.00	9999.00	-17.05	0.34	159.70	-0.00	-0.00	-9999.00	0.343
5.65	80.00	0.00	9999.00	-17.29	0.21	160.25	-0.00	-0.00	-9999.00	0.207
5.57	82.00	0.00	9999.00	-17.51	0.07	160.53	-0.00	-0.00	-9999.00	0.071
5.48	84.00	0.00	9999.00	-17.71	-0.07	160.54	-0.00	-0.00	-9999.00	-0.065

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 4 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**6
Roll Angle
0
8.5
17
25.5
34
42.5
51
59.5
68
76.5
85

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 4 ------   *
*                                                                                    *
**************************************************************************************************************
```

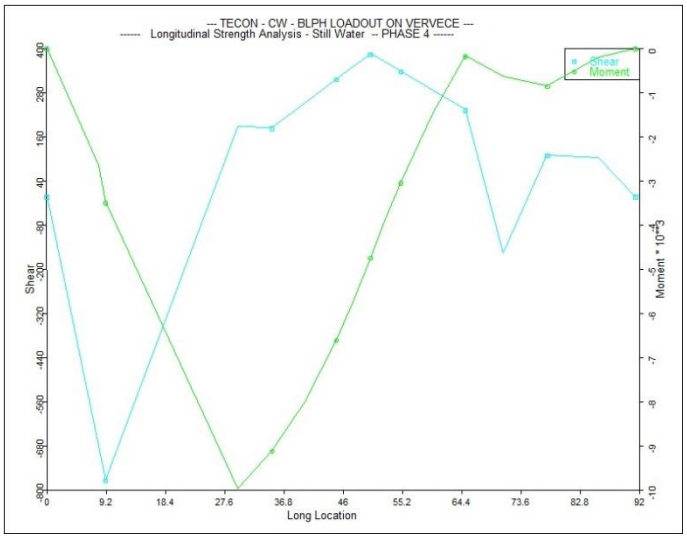
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 4: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-681	-2650	-0.1048	8.8067
9.14	-771	-3488	-0.1379	10.0309
29.72	187	-9968	-0.3939	25.0132
35.00	184	-9100	-0.3596	25.9817
40.00	251	-8013	-0.3167	25.8682
45.00	317	-6594	-0.2606	24.8745
47.50	349	-5762	-0.2277	24.0950
50.29	385	-4737	-0.1872	23.0380
52.50	363	-3910	-0.1546	22.0851
55.00	338	-3035	-0.1200	20.9054
60.00	286	-1475	-0.0583	18.3171
65.00	234	-174	-0.0069	15.5638
70.87	-156	-641	-0.0253	12.2803
77.72	109	-847	-0.0335	8.3177
85.70	101	-208	-0.0082	3.5094
91.44	-1	0	0.0000	0.0001



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 5 ---------               *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                     Process is 5: Units Are Degrees, Meters, and M-Tons Unless Specified

                                  Results Are Reported In Body System

                        Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

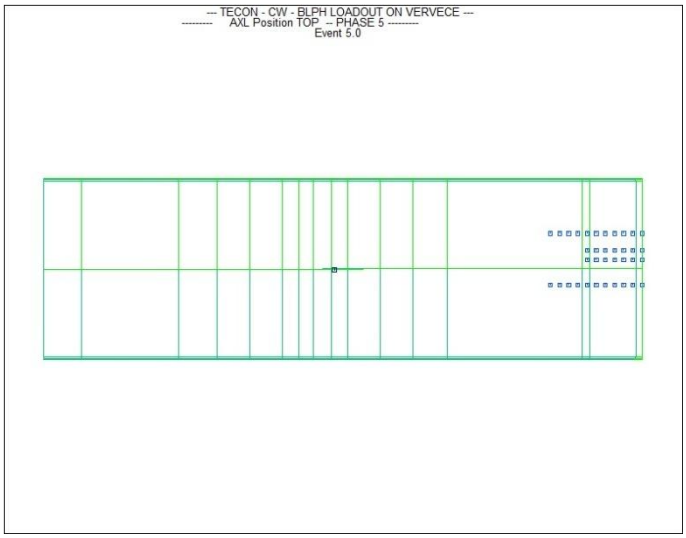
                                    Wet Radii Of Gyration About CG

                               K-X =     8.83 K-Y =    26.20 K-Z =    27.20

                                        GMT =    13.85 GML =   160.45

                               /-- Center of Gravity ---/  Sounding   % Full
                          Name  Weight    ---X---  ---Y---  ---Z---  -------- --------

                               ----------------  Part AXL5       ------------
                               LOAD_GRO    740.95     6.33    -1.36     7.10
                               ----------------  Part CF         ------------
                               LOAD_GRO     28.00    69.38    11.22     8.10
                               ----------------  Part GRI&SF-B   ------------
                               LOAD_GRO     75.00    30.86    -1.14     7.35
                               ----------------  Part GRI&SF-C   ------------
                               LOAD_GRO      0.50    67.44    11.22     7.10
                               ----------------  Part GRI&SF-T   ------------
                               LOAD_GRO     45.00    65.20    -2.92     7.40
                               ----------------  Part TP         ------------
                               LOAD_GRO    254.50    65.54    -2.14     9.35
                               ----------------  Part VERVECE    ------------
                               LOAD_GRO   1832.80    47.02     0.00     3.52
                                            --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW      328.49    19.43   -10.28     1.15     2.30    37.60
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      399.62    19.43    10.28     1.40     2.79    45.74
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      856.16    40.01    10.28     2.99     5.97    98.00
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      470.76    79.89   -10.28     2.02     3.82    59.32
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      542.21    80.05    10.28     2.29     4.33    68.32
                               ========  ========  =======  =======  =======
                               Total     10052.61    46.76     0.00     3.25
                               Buoyancy  10052.61    46.76     0.00     2.21
```




```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 5 ---------                              *
*                                                                                                    *
******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 5: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
                    ******************************************************
*                                      ***  MOSES   ***                                                    *
*                                      ----------------                          1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 5 ---------                                  . *
*                                                                                                         *
***********************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 5: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.25, and Wind Speed = 10 Knots

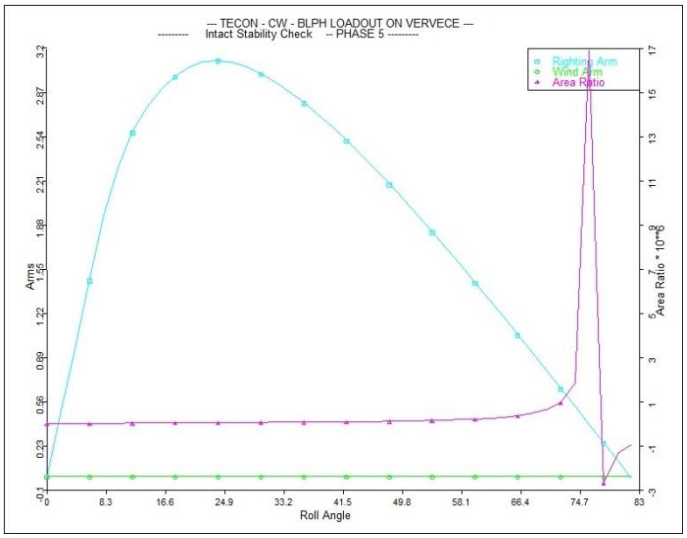
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.48	0.48	0.00	0.00	3028.43	0.484
4.29	4.00	0.00	9999.00	1.49	0.97	1.94	0.00	0.00	6231.70	0.973
4.27	6.00	0.00	9999.00	1.03	1.47	4.38	0.00	0.00	9797.15	1.466
4.25	8.00	0.00	9999.00	0.57	1.95	7.80	0.00	0.00	9999.00	1.953
4.26	10.00	0.00	9999.00	0.07	2.32	12.07	0.00	0.00	9999.00	2.318
4.31	12.00	0.00	9999.00	-0.46	2.57	16.96	0.00	0.00	9999.00	2.573
4.39	14.00	0.00	9999.00	-1.04	2.76	22.29	0.00	0.00	9999.00	2.757
4.48	16.00	0.00	9999.00	-1.63	2.89	27.94	0.00	0.00	9999.00	2.891
4.60	18.00	0.00	9999.00	-2.25	2.99	33.82	0.00	0.00	9999.00	2.990
4.72	20.00	0.00	9999.00	-2.88	3.06	39.87	0.00	0.00	9999.00	3.060
4.85	22.00	0.00	9999.00	-3.51	3.10	46.03	0.00	0.00	9999.00	3.100
4.97	24.00	0.00	9999.00	-4.15	3.11	52.24	0.00	0.00	9999.00	3.109
5.09	26.00	0.00	9999.00	-4.77	3.09	58.45	0.00	0.00	9999.00	3.093
5.20	28.00	0.00	9999.00	-5.39	3.06	64.60	0.00	0.00	9999.00	3.059
5.31	30.00	0.00	9999.00	-6.01	3.01	70.67	0.00	0.00	9999.00	3.009
5.41	32.00	0.00	9999.00	-6.62	2.95	76.62	0.00	0.00	9999.00	2.946
5.50	34.00	0.00	9999.00	-7.22	2.87	82.44	0.00	0.00	9999.00	2.874
5.58	36.00	0.00	9999.00	-7.81	2.79	88.11	-0.00	0.00	9999.00	2.793
5.66	38.00	0.00	9999.00	-8.39	2.71	93.61	-0.00	0.00	9999.00	2.706
5.73	40.00	0.00	9999.00	-8.96	2.61	98.92	-0.00	0.00	9999.00	2.612
5.80	42.00	0.00	9999.00	-9.52	2.51	104.05	-0.00	0.00	9999.00	2.512
5.86	44.00	0.00	9999.00	-10.07	2.41	108.97	-0.00	0.00	9999.00	2.408
5.91	46.00	0.00	9999.00	-10.61	2.30	113.68	-0.00	0.00	9999.00	2.299
5.95	48.00	0.00	9999.00	-11.13	2.19	118.16	-0.00	0.00	9999.00	2.186
5.99	50.00	0.00	9999.00	-11.64	2.07	122.42	-0.00	0.00	9999.00	2.070
6.02	52.00	0.00	9999.00	-12.14	1.95	126.44	-0.00	0.00	9999.00	1.951
6.04	54.00	0.00	9999.00	-12.62	1.83	130.22	-0.00	0.00	9999.00	1.829
6.05	56.00	0.00	9999.00	-13.08	1.70	133.75	-0.00	0.00	9999.00	1.705
6.06	58.00	0.00	9999.00	-13.53	1.58	137.04	-0.00	0.00	9999.00	1.579
6.06	60.00	0.00	9999.00	-13.97	1.45	140.06	-0.00	0.00	9999.00	1.451
6.05	62.00	0.00	9999.00	-14.38	1.32	142.84	-0.00	0.00	9999.00	1.322
6.03	64.00	0.00	9999.00	-14.78	1.19	145.35	-0.00	0.00	9999.00	1.191
6.01	66.00	0.00	9999.00	-15.16	1.06	147.60	-0.00	0.00	9999.00	1.060
5.98	68.00	0.00	9999.00	-15.53	0.93	149.59	-0.00	0.00	9999.00	0.927
5.94	70.00	0.00	9999.00	-15.87	0.79	151.31	-0.00	0.00	9999.00	0.794
5.90	72.00	0.00	9999.00	-16.19	0.66	152.76	-0.00	0.00	9999.00	0.659
5.85	74.00	0.00	9999.00	-16.50	0.52	153.95	-0.00	0.00	9999.00	0.524
5.79	76.00	0.00	9999.00	-16.78	0.39	154.86	-0.00	0.00	9999.00	0.389
5.72	78.00	0.00	9999.00	-17.05	0.25	155.50	-0.00	-0.00	-9999.00	0.253
5.65	80.00	0.00	9999.00	-17.29	0.12	155.87	-0.00	-0.00	-9999.00	0.116
5.57	82.00	0.00	9999.00	-17.51	-0.02	155.96	-0.00	-0.00	-9999.00	-0.021

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 5 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**6
Roll Angle
0
8.3
16.6
24.9
33.2
41.5
49.8
58.1
66.4
74.7
83

```
**********************************************************
*                                  ***  MOSES    ***                                  *
*                                  ----------------                  1 July, 2025    *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 5 ------   *
*                                                                                     *
***************************************************************************************************************
```

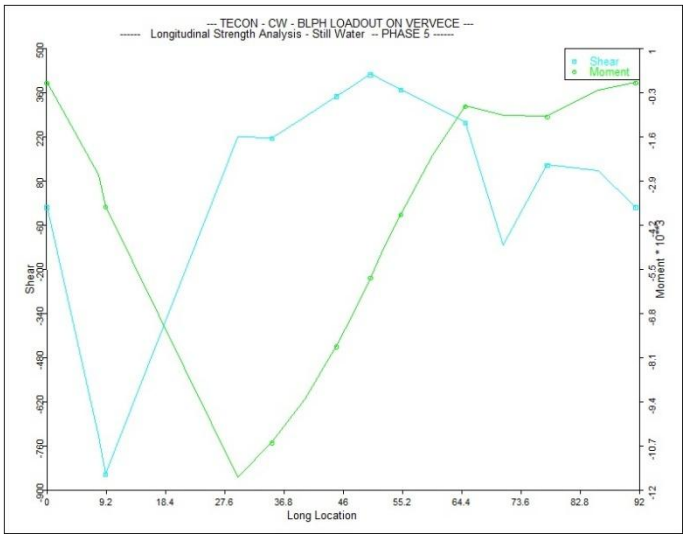
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 5: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-732	-2736	-0.1082	10.1819
9.14	-848	-3651	-0.1443	11.6021
29.72	220	-11631	-0.4597	29.3077
35.00	216	-10592	-0.4186	30.5310
40.00	283	-9343	-0.3692	30.4895
45.00	349	-7763	-0.3068	29.4211
47.50	382	-6850	-0.2707	28.5547
50.29	418	-5734	-0.2266	27.3655
52.50	395	-4836	-0.1911	26.2836
55.00	370	-3879	-0.1533	24.9339
60.00	318	-2158	-0.0853	21.9379
65.00	266	-696	-0.0275	18.7017
70.87	-124	-972	-0.0385	14.7797
77.72	131	-994	-0.0393	10.0082
85.70	110	-234	-0.0093	4.2209
91.44	-1	0	0.0000	0.0001



```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 6 ---------                              *
*                                                                                                    *
******************************************************************************************************

                +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                ======================================================================

                 Process is 6: Units Are Degrees, Meters, and M-Tons Unless Specified

                              Results Are Reported In Body System

                     Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

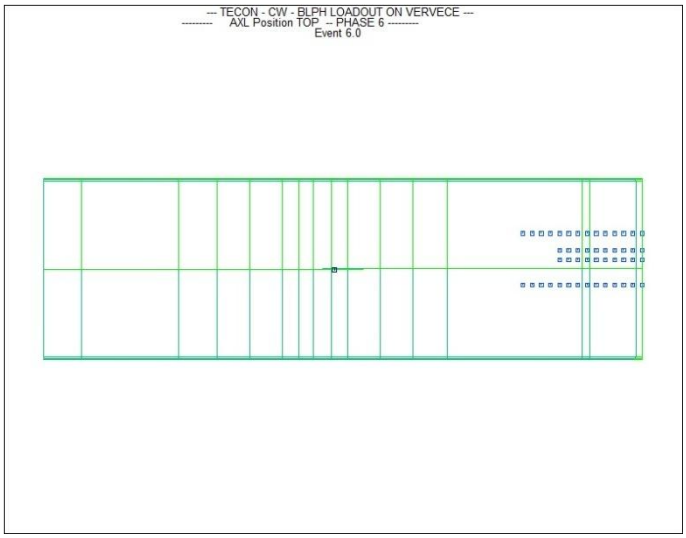
                                 Wet Radii Of Gyration About CG

                           K-X =     8.73 K-Y =    26.34 K-Z =    27.29

                                    GMT =    13.73 GML =   160.35

                           /-- Center of Gravity ---/  Sounding   % Full
                    Name    Weight    ---X---  ---Y---  ---Z---  -------- --------

                           ----------------  Part AXL6       ------------
                           LOAD_GRO    970.90     8.37    -1.39     7.10
                           ----------------  Part CF         ------------
                           LOAD_GRO     28.00    69.38    11.22     8.10
                           ----------------  Part GRI&SF-B   ------------
                           LOAD_GRO     75.00    30.86    -1.14     7.35
                           ----------------  Part GRI&SF-C   ------------
                           LOAD_GRO      0.50    67.44    11.22     7.10
                           ----------------  Part GRI&SF-T   ------------
                           LOAD_GRO     45.00    65.20    -2.92     7.40
                           ----------------  Part TP         ------------
                           LOAD_GRO    254.50    65.54    -2.14     9.35
                           ----------------  Part VERVECE    ------------
                           LOAD_GRO   1832.80    47.02     0.00     3.52
                                        --- Contents ---
                     1PC         229.92     5.62    -3.43     3.77     6.02    98.00
                     1PW         117.49     6.50   -10.28     2.53     4.06    50.00
                     1SC         230.42     5.62     3.43     3.77     6.02    98.00
                     1SW         117.49     6.50    10.28     2.53     4.06    50.00
                     2PC          26.21    19.43    -3.43     0.09     0.18     3.00
                     2PW         197.28    19.43   -10.27     0.69     1.38    22.58
                     2SC          26.21    19.43     3.43     0.09     0.18     3.00
                     2SW         284.48    19.43    10.27     1.00     1.99    32.56
                     3PC          26.21    40.00    -3.43     0.09     0.18     3.00
                     3PW         856.16    40.01   -10.28     2.99     5.97    98.00
                     3SC          26.21    40.01     3.43     0.09     0.18     3.00
                     3SW         856.16    40.01    10.28     2.99     5.97    98.00
                     4PC         262.11    60.58    -3.43     0.91     1.83    30.00
                     4PW         856.16    60.58   -10.28     2.99     5.97    98.00
                     4SC         262.11    60.58     3.43     0.91     1.83    30.00
                     4SW         856.16    60.58    10.28     2.99     5.97    98.00
                     5PC         295.21    83.42    -3.43     2.16     3.96    60.00
                     5PW         470.69    79.89   -10.28     2.02     3.82    59.31
                     5SC         290.58    83.42     3.43     2.16     3.96    60.00
                     5SW         558.68    80.09    10.28     2.35     4.44    70.40
                           ========  ========  =======  =======  =======
                           Total     10052.61    46.75     0.00     3.37
                           Buoyancy  10052.61    46.75     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 6 ---------                                   *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                    Process is 6: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
*********************************************************
*                                  ***  MOSES   ***                                    *
*                                  ----------------                 1 July, 2025      *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                  *
*        ---------     Intact Stability Check    -- PHASE 6 ---------                 . *
*                                                                                      *
****************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 6: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.37, and Wind Speed = 10 Knots

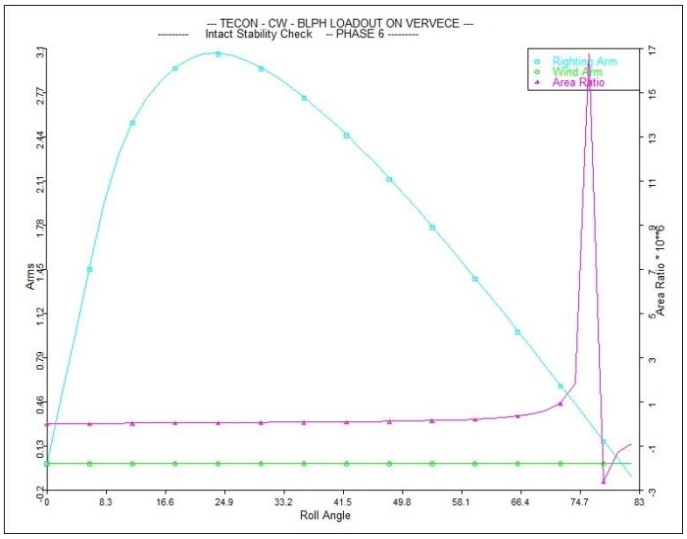
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.48	0.48	0.00	0.00	3002.68	0.480
4.29	4.00	0.00	9999.00	1.49	0.97	1.93	0.00	0.00	6178.86	0.965
4.27	6.00	0.00	9999.00	1.03	1.45	4.34	0.00	0.00	9714.31	1.453
4.25	8.00	0.00	9999.00	0.57	1.94	7.73	0.00	0.00	9999.00	1.936
4.26	10.00	0.00	9999.00	0.07	2.30	11.97	0.00	0.00	9999.00	2.298
4.31	12.00	0.00	9999.00	-0.46	2.55	16.81	0.00	0.00	9999.00	2.548
4.39	14.00	0.00	9999.00	-1.04	2.73	22.09	0.00	0.00	9999.00	2.728
4.48	16.00	0.00	9999.00	-1.63	2.86	27.68	0.00	0.00	9999.00	2.859
4.60	18.00	0.00	9999.00	-2.25	2.95	33.49	0.00	0.00	9999.00	2.954
4.72	20.00	0.00	9999.00	-2.88	3.02	39.47	0.00	0.00	9999.00	3.020
4.85	22.00	0.00	9999.00	-3.51	3.06	45.54	0.00	0.00	9999.00	3.056
4.97	24.00	0.00	9999.00	-4.14	3.06	51.66	0.00	0.00	9999.00	3.061
5.09	26.00	0.00	9999.00	-4.77	3.04	57.76	0.00	0.00	9999.00	3.042
5.20	28.00	0.00	9999.00	-5.39	3.00	63.81	0.00	0.00	9999.00	3.005
5.31	30.00	0.00	9999.00	-6.01	2.95	69.77	0.00	0.00	9999.00	2.953
5.41	32.00	0.00	9999.00	-6.62	2.89	75.61	0.00	0.00	9999.00	2.889
5.50	34.00	0.00	9999.00	-7.22	2.82	81.31	0.00	0.00	9999.00	2.815
5.58	36.00	0.00	9999.00	-7.81	2.73	86.86	-0.00	0.00	9999.00	2.734
5.66	38.00	0.00	9999.00	-8.39	2.65	92.24	-0.00	0.00	9999.00	2.646
5.73	40.00	0.00	9999.00	-8.96	2.55	97.44	-0.00	0.00	9999.00	2.552
5.80	42.00	0.00	9999.00	-9.52	2.45	102.45	-0.00	0.00	9999.00	2.453
5.86	44.00	0.00	9999.00	-10.07	2.35	107.25	-0.00	0.00	9999.00	2.349
5.91	46.00	0.00	9999.00	-10.61	2.24	111.84	-0.00	0.00	9999.00	2.241
5.95	48.00	0.00	9999.00	-11.13	2.13	116.21	-0.00	0.00	9999.00	2.128
5.99	50.00	0.00	9999.00	-11.64	2.01	120.35	-0.00	0.00	9999.00	2.011
6.02	52.00	0.00	9999.00	-12.14	1.89	124.25	-0.00	0.00	9999.00	1.891
6.04	54.00	0.00	9999.00	-12.62	1.77	127.91	-0.00	0.00	9999.00	1.768
6.05	56.00	0.00	9999.00	-13.08	1.64	131.32	-0.00	0.00	9999.00	1.642
6.06	58.00	0.00	9999.00	-13.53	1.51	134.47	-0.00	0.00	9999.00	1.514
6.06	60.00	0.00	9999.00	-13.97	1.38	137.37	-0.00	0.00	9999.00	1.384
6.05	62.00	0.00	9999.00	-14.38	1.25	140.01	-0.00	0.00	9999.00	1.253
6.03	64.00	0.00	9999.00	-14.78	1.12	142.38	-0.00	0.00	9999.00	1.120
6.01	66.00	0.00	9999.00	-15.16	0.99	144.49	-0.00	0.00	9999.00	0.987
5.98	68.00	0.00	9999.00	-15.53	0.85	146.33	-0.00	0.00	9999.00	0.852
5.94	70.00	0.00	9999.00	-15.87	0.72	147.89	-0.00	0.00	9999.00	0.716
5.90	72.00	0.00	9999.00	-16.19	0.58	149.19	-0.00	0.00	9999.00	0.580
5.85	74.00	0.00	9999.00	-16.50	0.44	150.21	-0.00	0.00	9999.00	0.443
5.79	76.00	0.00	9999.00	-16.78	0.31	150.96	-0.00	0.00	9999.00	0.305
5.72	78.00	0.00	9999.00	-17.05	0.17	151.43	-0.00	-0.00	-9999.00	0.168
5.65	80.00	0.00	9999.00	-17.29	0.03	151.63	-0.00	-0.00	-9999.00	0.030
5.57	82.00	0.00	9999.00	-17.51	-0.11	151.55	-0.00	-0.00	-9999.00	-0.109

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 6 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**6
Roll Angle
0
8.3
16.6
24.9
33.2
41.5
49.8
58.1
66.4
74.7
83

```
*********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------                  1 July, 2025    *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 6 ------  *
*                                                                                    *
**************************************************************************************************************
```

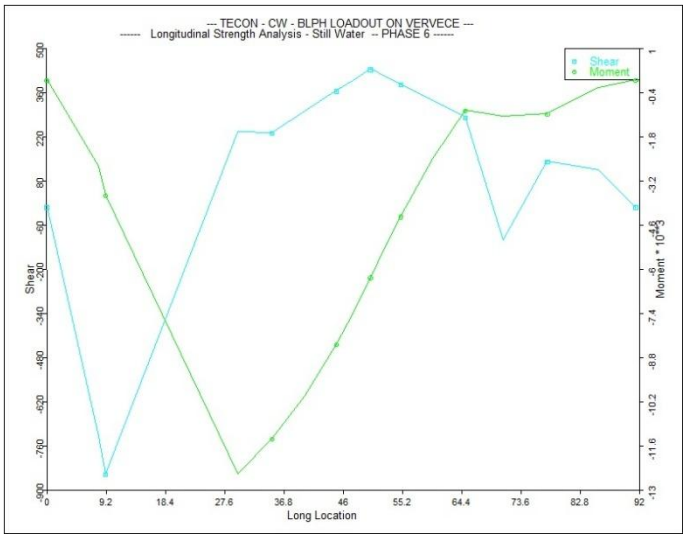
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 6: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-731	-2736	-0.1081	10.7862
9.14	-848	-3650	-0.1443	12.2929
29.72	236	-12490	-0.4936	31.3396
35.00	233	-11362	-0.4490	32.7102
40.00	300	-10030	-0.3964	32.7208
45.00	366	-8366	-0.3306	31.6285
47.50	398	-7411	-0.2929	30.7247
50.29	434	-6248	-0.2469	29.4757
52.50	412	-5314	-0.2100	28.3336
55.00	387	-4315	-0.1705	26.9037
60.00	335	-2510	-0.0992	23.7124
65.00	283	-965	-0.0382	20.2419
70.87	-107	-1144	-0.0452	16.0079
77.72	142	-1070	-0.0423	10.8395
85.70	115	-247	-0.0098	4.5708
91.44	-1	0	0.0000	0.0001



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 7 ---------               *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                     Process is 7: Units Are Degrees, Meters, and M-Tons Unless Specified

                                   Results Are Reported In Body System

                         Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

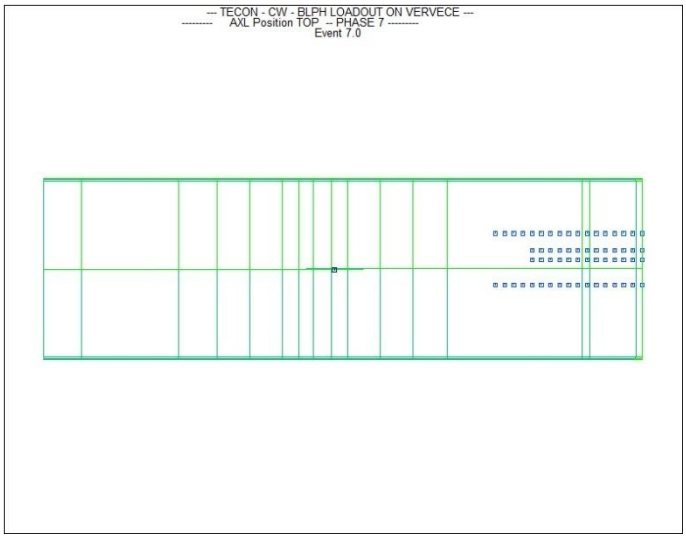
                                    Wet Radii Of Gyration About CG

                                K-X =     8.61 K-Y =    26.37 K-Z =    27.27

                                        GMT =    13.59 GML =   160.22

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL7       ------------
                                LOAD_GRO   1203.10    10.42    -1.40     7.10
                                ----------------  Part CF         ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B   ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C   ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T   ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP         ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE    ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                          --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW       72.47    19.43   -10.24     0.26     0.51     8.30
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      175.60    19.43    10.27     0.62     1.23    20.10
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      856.16    40.01   -10.28     2.99     5.97    98.00
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      856.16    40.01    10.28     2.99     5.97    98.00
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      463.18    79.87   -10.28     1.99     3.77    58.37
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      567.68    80.10    10.28     2.39     4.51    71.53
                                 ========  ========  =======  =======  =======
                                 Total     10052.61    46.75     0.00     3.50
                                 Buoyancy  10052.61    46.75     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 7 ---------                                   *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 7: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
                    ******************************************************
*                                      ***  MOSES   ***                                                    *
*                                      ----------------                          1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 7 ---------                                  . *
*                                                                                                         *
**********************************************************************************************************

                              +++ R I G H T I N G   A R M   R E S U L T S +++
                              ==============================================

                    Process is 7: Units Are Degrees, Meters, and M-Tons Unless Specified

                    Moment Scaled By 10052.61, KG = 3.50, and Wind Speed = 10 Knots

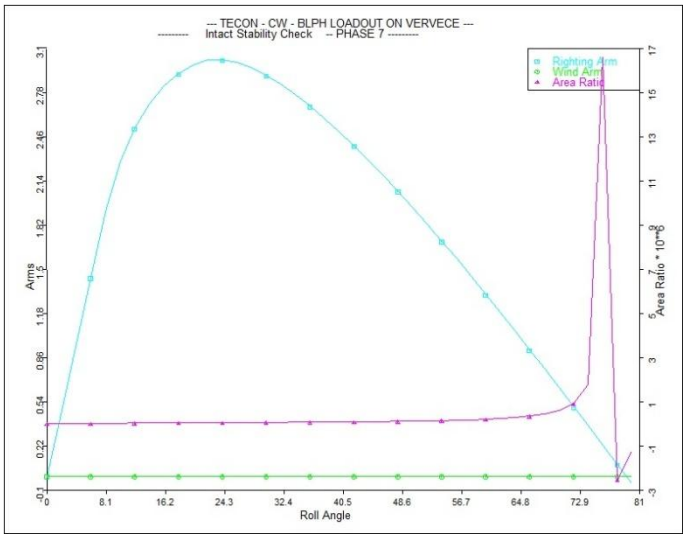
                              Initial: Roll = -0.00, Trim = 0.00 Deg.

                    Critical NWT Down Flooding Point Is *BOWPTWT

                    Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/   /-- Min. Height --/   /--- Righting ---/    /--- Heeling ---/    Area        Net
 Draft    Roll    Trim      W Tight  NW Tight        Arm      Area        Arm      Area     Ratio       Arm

 4.30    0.00    0.00     9999.00      2.40       0.00      0.00       0.00      0.00      0.00    -0.000
 4.30    2.00    0.00     9999.00      1.94       0.48      0.48       0.00      0.00   2973.06     0.475
 4.29    4.00    0.00     9999.00      1.49       0.96      1.91       0.00      0.00   6117.97     0.956
 4.27    6.00    0.00     9999.00      1.03       1.44      4.30       0.00      0.00   9618.79     1.439
 4.25    8.00    0.00     9999.00      0.57       1.92      7.66       0.00      0.00   9999.00     1.917
 4.26   10.00    0.00     9999.00      0.08       2.27     11.85       0.00      0.00   9999.00     2.275
 4.31   12.00    0.00     9999.00     -0.46       2.52     16.65       0.00      0.00   9999.00     2.521
 4.39   14.00    0.00     9999.00     -1.04       2.70     21.86       0.00      0.00   9999.00     2.697
 4.48   16.00    0.00     9999.00     -1.63       2.82     27.39       0.00      0.00   9999.00     2.825
 4.60   18.00    0.00     9999.00     -2.25       2.92     33.13       0.00      0.00   9999.00     2.917
 4.72   20.00    0.00     9999.00     -2.87       2.98     39.02       0.00      0.00   9999.00     2.980
 4.85   22.00    0.00     9999.00     -3.51       3.01     45.02       0.00      0.00   9999.00     3.014
 4.97   24.00    0.00     9999.00     -4.14       3.02     51.05       0.00      0.00   9999.00     3.017
 5.09   26.00    0.00     9999.00     -4.77       3.00     57.06       0.00      0.00   9999.00     2.996
 5.20   28.00    0.00     9999.00     -5.39       2.96     63.01       0.00      0.00   9999.00     2.957
 5.31   30.00    0.00     9999.00     -6.01       2.90     68.88       0.00      0.00   9999.00     2.904
 5.41   32.00    0.00     9999.00     -6.62       2.84     74.62       0.00      0.00   9999.00     2.839
 5.50   34.00    0.00     9999.00     -7.22       2.76     80.22       0.00      0.00   9999.00     2.764
 5.58   36.00    0.00     9999.00     -7.81       2.68     85.66      -0.00      0.00   9999.00     2.681
 5.66   38.00    0.00     9999.00     -8.39       2.59     90.94      -0.00      0.00   9999.00     2.592
 5.73   40.00    0.00     9999.00     -8.96       2.50     96.02      -0.00      0.00   9999.00     2.496
 5.80   42.00    0.00     9999.00     -9.52       2.40    100.92      -0.00      0.00   9999.00     2.396
 5.86   44.00    0.00     9999.00    -10.07       2.29    105.60      -0.00      0.00   9999.00     2.290
 5.91   46.00    0.00     9999.00    -10.61       2.18    110.07      -0.00      0.00   9999.00     2.180
 5.95   48.00    0.00     9999.00    -11.13       2.07    114.32      -0.00      0.00   9999.00     2.066
 5.99   50.00    0.00     9999.00    -11.64       1.95    118.33      -0.00      0.00   9999.00     1.948
 6.02   52.00    0.00     9999.00    -12.14       1.83    122.11      -0.00      0.00   9999.00     1.827
 6.04   54.00    0.00     9999.00    -12.62       1.70    125.64      -0.00      0.00   9999.00     1.703
 6.05   56.00    0.00     9999.00    -13.08       1.58    128.92      -0.00      0.00   9999.00     1.576
 6.06   58.00    0.00     9999.00    -13.53       1.45    131.94      -0.00      0.00   9999.00     1.448
 6.06   60.00    0.00     9999.00    -13.97       1.32    134.71      -0.00      0.00   9999.00     1.317
 6.05   62.00    0.00     9999.00    -14.38       1.18    137.21      -0.00      0.00   9999.00     1.184
 6.03   64.00    0.00     9999.00    -14.78       1.05    139.44      -0.00      0.00   9999.00     1.051
 6.01   66.00    0.00     9999.00    -15.16       0.92    141.41      -0.00      0.00   9999.00     0.915
 5.98   68.00    0.00     9999.00    -15.53       0.78    143.10      -0.00      0.00   9999.00     0.779
 5.94   70.00    0.00     9999.00    -15.87       0.64    144.52      -0.00      0.00   9999.00     0.642
 5.90   72.00    0.00     9999.00    -16.19       0.50    145.67      -0.00      0.00   9999.00     0.504
 5.85   74.00    0.00     9999.00    -16.50       0.36    146.54      -0.00      0.00   9999.00     0.365
 5.79   76.00    0.00     9999.00    -16.78       0.23    147.13      -0.00      0.00   9999.00     0.226
 5.72   78.00    0.00     9999.00    -17.05       0.09    147.44      -0.00     -0.00  -9999.00     0.086
 5.65   80.00    0.00     9999.00    -17.29      -0.05    147.47      -0.00     -0.00  -9999.00    -0.054
```


--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 7 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**6
Roll Angle
0
8.1
16.2
24.3
32.4
40.5
48.6
56.7
64.8
72.9
81

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 7 ------   *
*                                                                                    *
**************************************************************************************************************
```

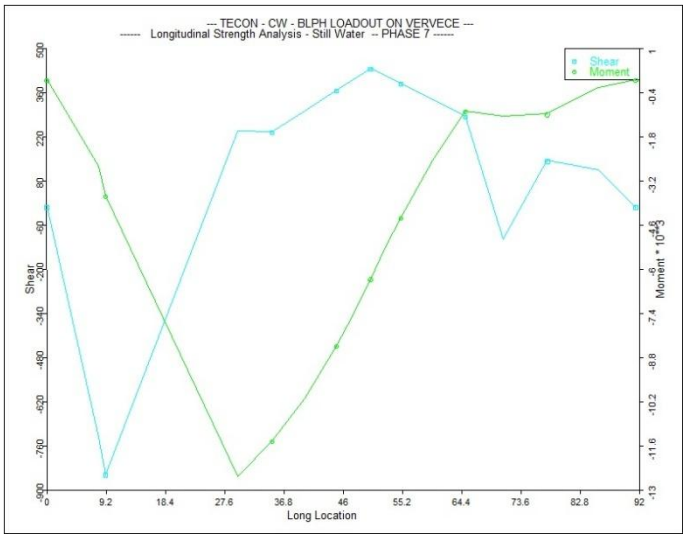
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 7: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-734	-2753	-0.1088	10.7764
9.14	-850	-3670	-0.1451	12.2814
29.72	238	-12580	-0.4971	31.3919
35.00	235	-11443	-0.4522	32.7917
40.00	302	-10102	-0.3992	32.8204
45.00	367	-8429	-0.3331	31.7386
47.50	400	-7469	-0.2952	30.8374
50.29	436	-6302	-0.2491	29.5892
52.50	414	-5363	-0.2120	28.4466
55.00	389	-4360	-0.1723	27.0146
60.00	337	-2546	-0.1006	23.8158
65.00	284	-992	-0.0392	20.3337
70.87	-105	-1161	-0.0459	16.0825
77.72	143	-1078	-0.0426	10.8905
85.70	115	-248	-0.0098	4.5923
91.44	-1	0	0.0000	0.0002



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 8 ---------               *
*                                                                                    *
**************************************************************************************************************
```

+++ B U O Y A N C Y A N D W E I G H T F O R V E R V E C E +++

Process is 8: Units Are Degrees, Meters, and M-Tons Unless Specified

Results Are Reported In Body System

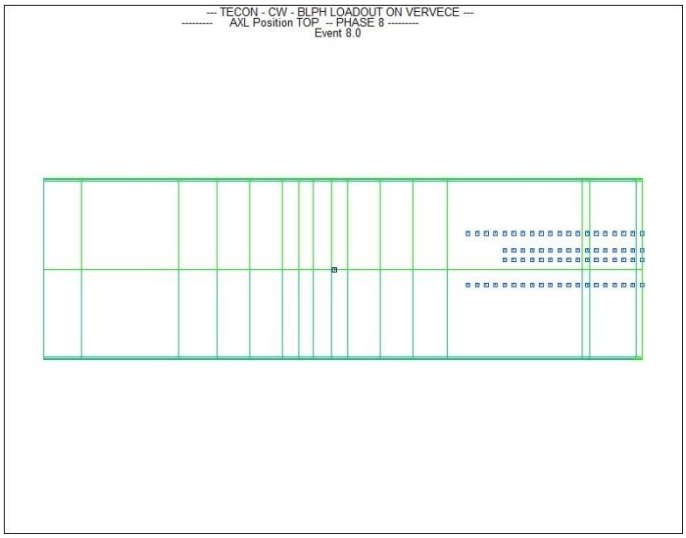
Draft = 4.30 Roll Angle = 0.00 Pitch Angle = 0.00

Wet Radii Of Gyration About CG

K-X = 8.51 K-Y = 26.83 K-Z = 27.67

GMT = 13.56 GML = 160.30

Name	Weight	/-- Center of Gravity ---/ ---X---	---Y---	---Z---	Sounding	% Full
		Part AXL8				
LOAD_GRO	1439.80	12.44	-1.39	7.10		
		Part CF				
LOAD_GRO	28.00	69.38	11.22	8.10		
		Part GRI&SF-B				
LOAD_GRO	75.00	30.86	-1.14	7.35		
		Part GRI&SF-C				
LOAD_GRO	0.50	67.44	11.22	7.10		
		Part GRI&SF-T				
LOAD_GRO	45.00	65.20	-2.92	7.40		
		Part TP				
LOAD_GRO	254.50	65.54	-2.14	9.35		
		Part VERVECE				
LOAD_GRO	1832.80	47.02	0.00	3.52		
		--- Contents ---				
1PC	229.92	5.62	-3.43	3.77	6.02	98.00
1PW	117.49	6.50	-10.28	2.53	4.06	50.00
1SC	230.42	5.62	3.43	3.77	6.02	98.00
1SW	117.49	6.50	10.28	2.53	4.06	50.00
2PC	26.21	19.43	-3.43	0.09	0.18	3.00
2PW	72.47	19.43	-10.24	0.26	0.51	8.30
2SC	26.21	19.43	3.43	0.09	0.18	3.00
2SW	175.60	19.43	10.27	0.62	1.23	20.10
3PC	26.21	40.00	-3.43	0.09	0.18	3.00
3PW	654.06	40.00	-10.28	2.29	4.57	74.87
3SC	26.21	40.01	3.43	0.09	0.18	3.00
3SW	722.43	40.01	10.28	2.52	5.04	82.69
4PC	262.11	60.58	-3.43	0.91	1.83	30.00
4PW	856.16	60.58	-10.28	2.99	5.97	98.00
4SC	262.11	60.58	3.43	0.91	1.83	30.00
4SW	856.16	60.58	10.28	2.99	5.97	98.00
5PC	295.21	83.42	-3.43	2.16	3.96	60.00
5PW	531.01	80.03	-10.28	2.25	4.25	66.91
5SC	290.58	83.42	3.43	2.16	3.96	60.00
5SW	598.98	80.16	10.28	2.50	4.73	75.48
Total	10052.61	46.75	0.00	3.53		
Buoyancy	10052.61	46.75	-0.00	2.21		




```
                    ********************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 8 ---------                              *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 8: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 8 ---------             . *
*                                                                                    *
**************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 8: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.53, and Wind Speed = 10 Knots

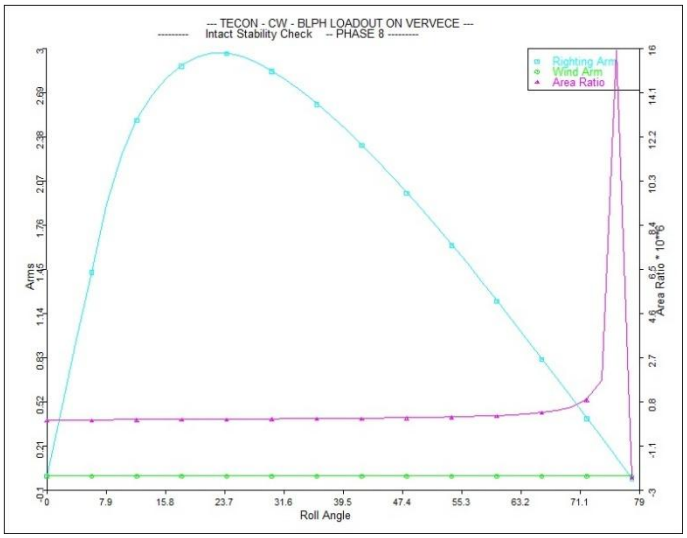
Initial: Roll = 0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.47	0.47	0.00	0.00	2966.60	0.474
4.29	4.00	0.00	9999.00	1.49	0.95	1.90	0.00	0.00	6099.78	0.952
4.27	6.00	0.00	9999.00	1.03	1.43	4.28	0.00	0.00	9581.25	1.431
4.25	8.00	0.00	9999.00	0.57	1.91	7.62	0.00	0.00	9999.00	1.905
4.26	10.00	0.00	9999.00	0.08	2.26	11.78	0.00	0.00	9999.00	2.258
4.31	12.00	0.00	9999.00	-0.46	2.50	16.54	0.00	0.00	9999.00	2.500
4.39	14.00	0.00	9999.00	-1.04	2.67	21.71	0.00	0.00	9999.00	2.671
4.48	16.00	0.00	9999.00	-1.63	2.79	27.18	0.00	0.00	9999.00	2.793
4.60	18.00	0.00	9999.00	-2.25	2.88	32.85	0.00	0.00	9999.00	2.880
4.72	20.00	0.00	9999.00	-2.88	2.94	38.67	0.00	0.00	9999.00	2.938
4.85	22.00	0.00	9999.00	-3.51	2.97	44.57	0.00	0.00	9999.00	2.967
4.97	24.00	0.00	9999.00	-4.14	2.97	50.51	0.00	0.00	9999.00	2.966
5.09	26.00	0.00	9999.00	-4.77	2.94	56.41	0.00	0.00	9999.00	2.941
5.20	28.00	0.00	9999.00	-5.39	2.90	62.25	0.00	0.00	9999.00	2.899
5.31	30.00	0.00	9999.00	-6.01	2.84	67.99	0.00	0.00	9999.00	2.842
5.41	32.00	0.00	9999.00	-6.62	2.77	73.61	0.00	0.00	9999.00	2.774
5.50	34.00	0.00	9999.00	-7.22	2.70	79.08	0.00	0.00	9999.00	2.697
5.58	36.00	0.00	9999.00	-7.81	2.61	84.39	-0.00	0.00	9999.00	2.612
5.66	38.00	0.00	9999.00	-8.39	2.52	89.52	-0.00	0.00	9999.00	2.521
5.73	40.00	0.00	9999.00	-8.96	2.42	94.47	-0.00	0.00	9999.00	2.424
5.80	42.00	0.00	9999.00	-9.52	2.32	99.22	-0.00	0.00	9999.00	2.322
5.86	44.00	0.00	9999.00	-10.07	2.22	103.75	-0.00	0.00	9999.00	2.216
5.91	46.00	0.00	9999.00	-10.61	2.10	108.07	-0.00	0.00	9999.00	2.104
5.95	48.00	0.00	9999.00	-11.13	1.99	112.17	-0.00	0.00	9999.00	1.989
5.99	50.00	0.00	9999.00	-11.64	1.87	116.03	-0.00	0.00	9999.00	1.870
6.02	52.00	0.00	9999.00	-12.14	1.75	119.64	-0.00	0.00	9999.00	1.747
6.04	54.00	0.00	9999.00	-12.62	1.62	123.01	-0.00	0.00	9999.00	1.622
6.05	56.00	0.00	9999.00	-13.08	1.49	126.13	-0.00	0.00	9999.00	1.494
6.06	58.00	0.00	9999.00	-13.53	1.36	128.98	-0.00	0.00	9999.00	1.363
6.06	60.00	0.00	9999.00	-13.97	1.23	131.58	-0.00	0.00	9999.00	1.230
6.05	62.00	0.00	9999.00	-14.38	1.10	133.90	-0.00	0.00	9999.00	1.096
6.03	64.00	0.00	9999.00	-14.78	0.96	135.96	-0.00	0.00	9999.00	0.960
6.01	66.00	0.00	9999.00	-15.16	0.82	137.74	-0.00	0.00	9999.00	0.823
5.98	68.00	0.00	9999.00	-15.53	0.68	139.25	-0.00	0.00	9999.00	0.684
5.94	70.00	0.00	9999.00	-15.87	0.55	140.48	-0.00	0.00	9999.00	0.545
5.90	72.00	0.00	9999.00	-16.19	0.41	141.43	-0.00	0.00	9999.00	0.406
5.85	74.00	0.00	9999.00	-16.50	0.27	142.10	-0.00	0.00	9999.00	0.266
5.79	76.00	0.00	9999.00	-16.78	0.13	142.49	-0.00	0.00	9999.00	0.125
5.72	78.00	0.00	9999.00	-17.05	-0.02	142.60	-0.00	-0.00	-9999.00	-0.015

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
--------- Intact Stability Check -- PHASE 8 ---------
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^6
Roll Angle
0
7.9
15.8
23.7
31.6
39.5
47.4
55.3
63.2
71.1
79

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 8 ------   *
*                                                                                    *
**************************************************************************************************************
```

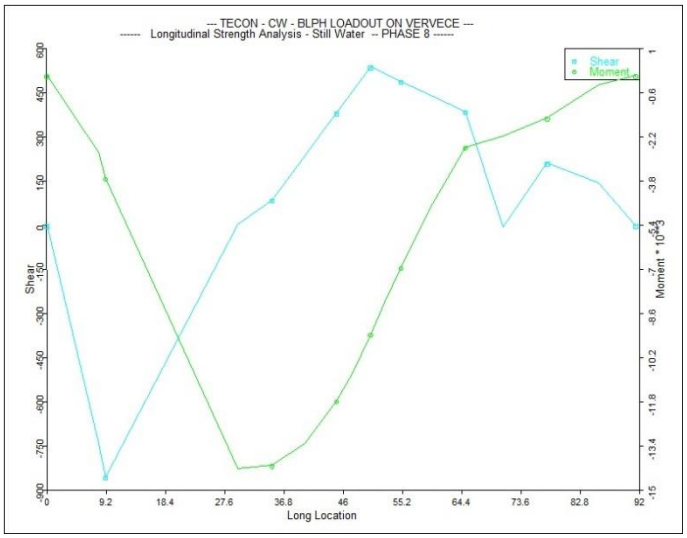
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 8: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-740	-2788	-0.1102	12.7280
9.14	-856	-3713	-0.1468	14.5116
29.72	1	-14226	-0.5622	38.4754
35.00	84	-14112	-0.5577	40.8521
40.00	233	-13319	-0.5263	41.5089
45.00	380	-11786	-0.4658	40.7041
47.50	454	-10743	-0.4246	39.8034
50.29	535	-9363	-0.3700	38.4494
52.50	513	-8205	-0.3243	37.1484
55.00	488	-6954	-0.2748	35.4636
60.00	436	-4644	-0.1836	31.5515
65.00	384	-2594	-0.1026	27.1248
70.87	-6	-2182	-0.0862	21.5441
77.72	209	-1532	-0.0606	14.6061
85.70	143	-328	-0.0130	6.1595
91.44	-1	0	0.0000	0.0002



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------                 1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 9 ---------              *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                     Process is 9: Units Are Degrees, Meters, and M-Tons Unless Specified

                                   Results Are Reported In Body System

                         Draft =     4.30 Roll Angle =     0.00 Pitch Angle =     0.00

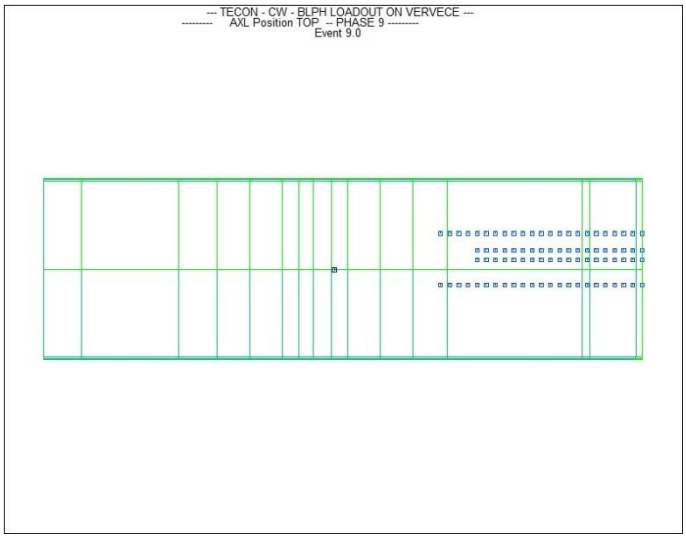
                                    Wet Radii Of Gyration About CG

                                K-X =     8.40 K-Y =    27.16 K-Z =    27.94

                                        GMT =    13.49 GML =   160.29

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL9       ------------
                                LOAD_GRO   1676.50    14.49    -1.39     7.10
                                ----------------  Part CF         ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B   ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C   ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T   ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP         ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE    ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                          1PC       229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW       117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC       230.42     5.62     3.43     3.77     6.02    98.00
                          1SW       117.49     6.50    10.28     2.53     4.06    50.00
                          2PC        26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW        72.47    19.43   -10.24     0.26     0.51     8.30
                          2SC        26.21    19.43     3.43     0.09     0.18     3.00
                          2SW       175.60    19.43    10.27     0.62     1.23    20.10
                          3PC        26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW       490.34    40.01   -10.28     1.72     3.42    56.13
                          3SC        26.21    40.01     3.43     0.09     0.18     3.00
                          3SW       574.36    40.01    10.28     2.01     4.01    65.74
                          4PC       262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW       856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC       262.11    60.58     3.43     0.91     1.83    30.00
                          4SW       856.16    60.58    10.28     2.99     5.97    98.00
                          5PC       295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW       560.40    80.09   -10.28     2.36     4.45    70.62
                          5SC       290.58    83.42     3.43     2.16     3.96    60.00
                          5SW       644.67    80.23    10.28     2.67     5.05    81.24
                                ========  ========  =======  =======  =======
                                Total     10052.61    46.75     0.00     3.60
                                Buoyancy  10052.61    46.75    -0.00     2.21
```




```
                    ********************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 9 ---------                              *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 9: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 9 ---------             . *
*                                                                                    *
**************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 9: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.60, and Wind Speed = 10 Knots

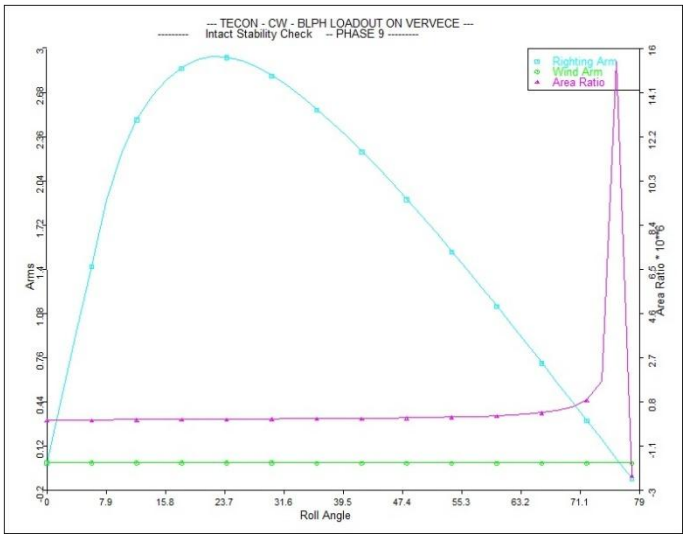
Initial: Roll = 0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.47	0.47	0.00	0.00	2951.24	0.472
4.29	4.00	0.00	9999.00	1.49	0.95	1.89	0.00	0.00	6068.26	0.947
4.27	6.00	0.00	9999.00	1.03	1.42	4.26	0.00	0.00	9531.84	1.424
4.25	8.00	0.00	9999.00	0.57	1.90	7.58	0.00	0.00	9999.00	1.896
4.26	10.00	0.00	9999.00	0.08	2.25	11.72	0.00	0.00	9999.00	2.246
4.31	12.00	0.00	9999.00	-0.46	2.49	16.45	0.00	0.00	9999.00	2.485
4.39	14.00	0.00	9999.00	-1.04	2.65	21.59	0.00	0.00	9999.00	2.654
4.48	16.00	0.00	9999.00	-1.63	2.77	27.02	0.00	0.00	9999.00	2.774
4.60	18.00	0.00	9999.00	-2.25	2.86	32.65	0.00	0.00	9999.00	2.858
4.72	20.00	0.00	9999.00	-2.88	2.91	38.43	0.00	0.00	9999.00	2.914
4.85	22.00	0.00	9999.00	-3.51	2.94	44.28	0.00	0.00	9999.00	2.941
4.97	24.00	0.00	9999.00	-4.14	2.94	50.16	0.00	0.00	9999.00	2.937
5.09	26.00	0.00	9999.00	-4.77	2.91	56.00	0.00	0.00	9999.00	2.909
5.20	28.00	0.00	9999.00	-5.39	2.86	61.78	0.00	0.00	9999.00	2.863
5.31	30.00	0.00	9999.00	-6.01	2.80	67.44	0.00	0.00	9999.00	2.803
5.41	32.00	0.00	9999.00	-6.62	2.73	72.98	0.00	0.00	9999.00	2.731
5.50	34.00	0.00	9999.00	-7.22	2.65	78.36	0.00	0.00	9999.00	2.649
5.58	36.00	0.00	9999.00	-7.81	2.56	83.57	-0.00	0.00	9999.00	2.560
5.66	38.00	0.00	9999.00	-8.39	2.46	88.59	-0.00	0.00	9999.00	2.464
5.73	40.00	0.00	9999.00	-8.96	2.36	93.42	-0.00	0.00	9999.00	2.362
5.80	42.00	0.00	9999.00	-9.52	2.26	98.03	-0.00	0.00	9999.00	2.255
5.86	44.00	0.00	9999.00	-10.07	2.14	102.43	-0.00	0.00	9999.00	2.143
5.91	46.00	0.00	9999.00	-10.61	2.03	106.60	-0.00	0.00	9999.00	2.028
5.95	48.00	0.00	9999.00	-11.13	1.91	110.54	-0.00	0.00	9999.00	1.908
5.99	50.00	0.00	9999.00	-11.64	1.79	114.23	-0.00	0.00	9999.00	1.785
6.02	52.00	0.00	9999.00	-12.14	1.66	117.68	-0.00	0.00	9999.00	1.659
6.04	54.00	0.00	9999.00	-12.62	1.53	120.87	-0.00	0.00	9999.00	1.531
6.05	56.00	0.00	9999.00	-13.08	1.40	123.80	-0.00	0.00	9999.00	1.400
6.06	58.00	0.00	9999.00	-13.53	1.27	126.46	-0.00	0.00	9999.00	1.267
6.06	60.00	0.00	9999.00	-13.97	1.13	128.86	-0.00	0.00	9999.00	1.133
6.05	62.00	0.00	9999.00	-14.38	1.00	130.99	-0.00	0.00	9999.00	0.997
6.03	64.00	0.00	9999.00	-14.78	0.86	132.85	-0.00	0.00	9999.00	0.860
6.01	66.00	0.00	9999.00	-15.16	0.72	134.43	-0.00	0.00	9999.00	0.723
5.98	68.00	0.00	9999.00	-15.53	0.58	135.74	-0.00	0.00	9999.00	0.584
5.94	70.00	0.00	9999.00	-15.87	0.44	136.77	-0.00	0.00	9999.00	0.445
5.90	72.00	0.00	9999.00	-16.19	0.30	137.52	-0.00	0.00	9999.00	0.305
5.85	74.00	0.00	9999.00	-16.50	0.16	137.99	-0.00	0.00	9999.00	0.165
5.79	76.00	0.00	9999.00	-16.78	0.02	138.18	-0.00	0.00	9999.00	0.025
5.72	78.00	0.00	9999.00	-17.05	-0.12	138.09	-0.00	-0.00	-9999.00	-0.116

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 9
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^6
Roll Angle
0
7.9
15.8
23.7
31.6
39.5
47.4
55.3
63.2
71.1
79

```
**********************************************************
*                                  ***  MOSES    ***                                  *
*                                  ----------------                  1 July, 2025    *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 9 ------   *
*                                                                                     *
***************************************************************************************************************
```

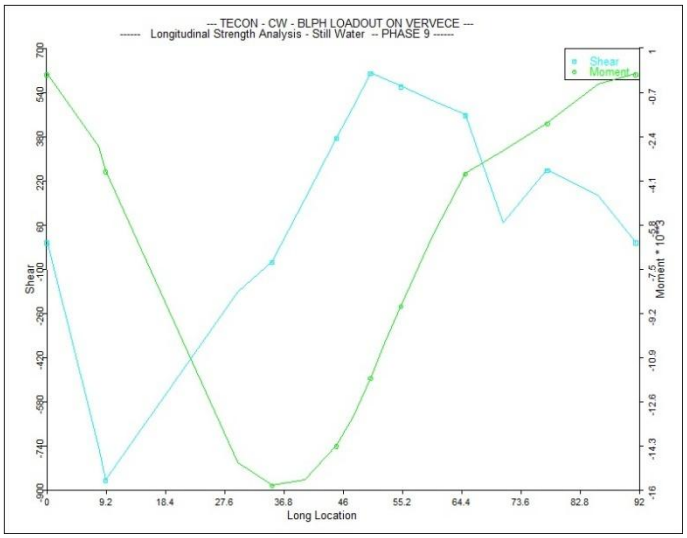
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 9: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-745	-2795	-0.1105	14.0442
9.14	-863	-3727	-0.1473	16.0160
29.72	-183	-14936	-0.5902	43.2930
35.00	-71	-15805	-0.6246	46.3995
40.00	152	-15605	-0.6167	47.5606
45.00	375	-14288	-0.5646	47.0118
47.50	486	-13210	-0.5221	46.1367
50.29	610	-11679	-0.4615	44.7314
52.50	588	-10356	-0.4093	43.3332
55.00	563	-8917	-0.3524	41.4827
60.00	511	-6232	-0.2463	37.0822
65.00	459	-3807	-0.1505	31.9920
70.87	68	-2954	-0.1168	25.4657
77.72	259	-1875	-0.0741	17.2768
85.70	164	-388	-0.0154	7.2863
91.44	-1	0	0.0000	0.0002



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------                  1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 10 ---------              *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                    Process is 10: Units Are Degrees, Meters, and M-Tons Unless Specified

                                   Results Are Reported In Body System

                        Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

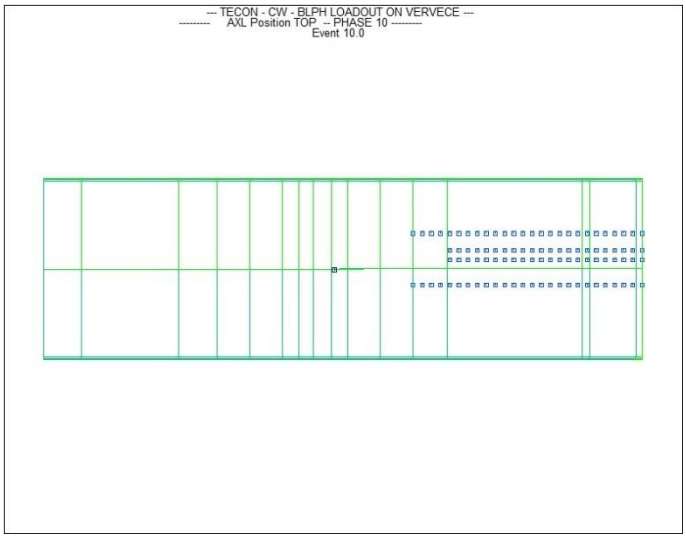
                                     Wet Radii Of Gyration About CG

                                K-X =     8.28 K-Y =    27.37 K-Z =    28.10

                                      GMT =    13.39 GML =   160.21

                                /-- Center of Gravity ---/  Sounding   % Full
                           Name  Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL10      ------------
                                LOAD_GRO   1913.20    16.56    -1.39     7.10
                                ----------------  Part CF         ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B   ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C   ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T   ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP         ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE    ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                           --- Contents ---
                           1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                           1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                           1SC      230.42     5.62     3.43     3.77     6.02    98.00
                           1SW      117.49     6.50    10.28     2.53     4.06    50.00
                           2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                           2PW       72.47    19.43   -10.24     0.26     0.51     8.30
                           2SC       26.21    19.43     3.43     0.09     0.18     3.00
                           2SW      175.60    19.43    10.27     0.62     1.23    20.10
                           3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                           3PW      338.06    40.01   -10.28     1.18     2.36    38.70
                           3SC       26.21    40.01     3.43     0.09     0.18     3.00
                           3SW      437.76    40.01    10.28     1.53     3.06    50.11
                           4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                           4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                           4SC      262.11    60.58     3.43     0.91     1.83    30.00
                           4SW      856.16    60.58    10.28     2.99     5.97    98.00
                           5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                           5PW      578.35    80.12   -10.28     2.43     4.58    72.88
                           5SC      290.58    83.42     3.43     2.16     3.96    60.00
                           5SW      678.90    80.27    10.28     2.80     5.29    85.55
                                ========  ========  =======  =======  =======
                                Total     10052.61    46.76     0.00     3.70
                                Buoyancy  10052.61    46.76     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 10 ---------                                  *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 10: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
                    ******************************************************
*                                      ***  MOSES   ***                                                    *
*                                      ----------------                          1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 10 ---------                                  .*
*                                                                                                         *
***********************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 10: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.70, and Wind Speed = 10 Knots

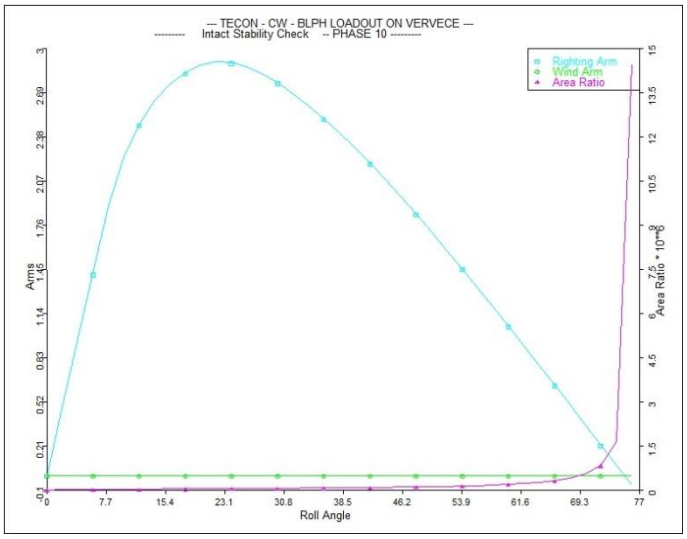
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.47	0.47	0.00	0.00	2929.12	0.468
4.29	4.00	0.00	9999.00	1.48	0.94	1.88	0.00	0.00	6022.81	0.940
4.27	6.00	0.00	9999.00	1.03	1.41	4.23	0.00	0.00	9460.61	1.414
4.25	8.00	0.00	9999.00	0.57	1.88	7.53	0.00	0.00	9999.00	1.882
4.26	10.00	0.00	9999.00	0.07	2.23	11.64	0.00	0.00	9999.00	2.228
4.31	12.00	0.00	9999.00	-0.47	2.46	16.33	0.00	0.00	9999.00	2.464
4.39	14.00	0.00	9999.00	-1.04	2.63	21.42	0.00	0.00	9999.00	2.630
4.48	16.00	0.00	9999.00	-1.63	2.75	26.80	0.00	0.00	9999.00	2.746
4.60	18.00	0.00	9999.00	-2.25	2.83	32.37	0.00	0.00	9999.00	2.828
4.72	20.00	0.00	9999.00	-2.88	2.88	38.08	0.00	0.00	9999.00	2.881
4.85	22.00	0.00	9999.00	-3.51	2.91	43.87	0.00	0.00	9999.00	2.905
4.97	24.00	0.00	9999.00	-4.15	2.90	49.67	0.00	0.00	9999.00	2.899
5.09	26.00	0.00	9999.00	-4.77	2.87	55.44	0.00	0.00	9999.00	2.868
5.20	28.00	0.00	9999.00	-5.40	2.82	61.13	0.00	0.00	9999.00	2.820
5.31	30.00	0.00	9999.00	-6.01	2.76	66.70	0.00	0.00	9999.00	2.757
5.41	32.00	0.00	9999.00	-6.62	2.68	72.14	0.00	0.00	9999.00	2.682
5.50	34.00	0.00	9999.00	-7.22	2.60	77.42	0.00	0.00	9999.00	2.598
5.58	36.00	0.00	9999.00	-7.81	2.51	82.53	-0.00	0.00	9999.00	2.506
5.66	38.00	0.00	9999.00	-8.39	2.41	87.44	-0.00	0.00	9999.00	2.407
5.73	40.00	0.00	9999.00	-8.96	2.30	92.15	-0.00	0.00	9999.00	2.302
5.80	42.00	0.00	9999.00	-9.52	2.19	96.64	-0.00	0.00	9999.00	2.192
5.86	44.00	0.00	9999.00	-10.07	2.08	100.91	-0.00	0.00	9999.00	2.077
5.91	46.00	0.00	9999.00	-10.61	1.96	104.95	-0.00	0.00	9999.00	1.959
5.95	48.00	0.00	9999.00	-11.13	1.84	108.74	-0.00	0.00	9999.00	1.836
5.99	50.00	0.00	9999.00	-11.64	1.71	112.29	-0.00	0.00	9999.00	1.711
6.01	52.00	0.00	9999.00	-12.14	1.58	115.58	-0.00	0.00	9999.00	1.583
6.04	54.00	0.00	9999.00	-12.62	1.45	118.62	-0.00	0.00	9999.00	1.453
6.05	56.00	0.00	9999.00	-13.08	1.32	121.39	-0.00	0.00	9999.00	1.320
6.06	58.00	0.00	9999.00	-13.53	1.19	123.90	-0.00	0.00	9999.00	1.186
6.06	60.00	0.00	9999.00	-13.97	1.05	126.14	-0.00	0.00	9999.00	1.050
6.05	62.00	0.00	9999.00	-14.38	0.91	128.10	-0.00	0.00	9999.00	0.913
6.03	64.00	0.00	9999.00	-14.78	0.77	129.79	-0.00	0.00	9999.00	0.775
6.01	66.00	0.00	9999.00	-15.16	0.64	131.20	-0.00	0.00	9999.00	0.636
5.98	68.00	0.00	9999.00	-15.53	0.50	132.33	-0.00	0.00	9999.00	0.496
5.94	70.00	0.00	9999.00	-15.87	0.36	133.18	-0.00	0.00	9999.00	0.356
5.90	72.00	0.00	9999.00	-16.19	0.21	133.75	-0.00	0.00	9999.00	0.215
5.85	74.00	0.00	9999.00	-16.50	0.07	134.04	-0.00	0.00	9999.00	0.074
5.79	76.00	0.00	9999.00	-16.78	-0.07	134.05	-0.00	0.00	9999.00	-0.067

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 10
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**8
Roll Angle
0
7.7
15.4
23.1
30.8
38.5
46.2
53.9
61.6
69.3
77

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 10 ------   *
*                                                                                    *
**************************************************************************************************************
```

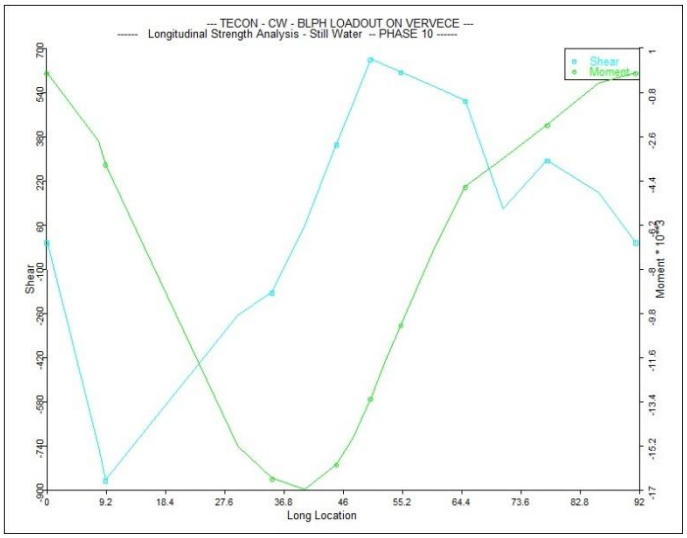
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 10: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-745	-2797	-0.1106	14.8403
9.14	-863	-3729	-0.1474	16.9258
29.72	-267	-15205	-0.6009	46.2128
35.00	-184	-16536	-0.6535	49.7862
40.00	59	-16977	-0.6709	51.3039
45.00	352	-15950	-0.6303	50.9636
47.50	499	-14887	-0.5883	50.1256
50.29	662	-13267	-0.5243	48.7078
52.50	639	-11830	-0.4675	47.2608
55.00	614	-10263	-0.4056	45.3169
60.00	563	-7321	-0.2893	40.6216
65.00	510	-4639	-0.1834	35.1171
70.87	119	-3484	-0.1377	27.9895
77.72	294	-2110	-0.0834	18.9980
85.70	178	-429	-0.0170	8.0129
91.44	-1	0	0.0000	0.0001



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------                 1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 11 ---------              *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                    Process is 11: Units Are Degrees, Meters, and M-Tons Unless Specified

                                  Results Are Reported In Body System

                        Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =     0.00

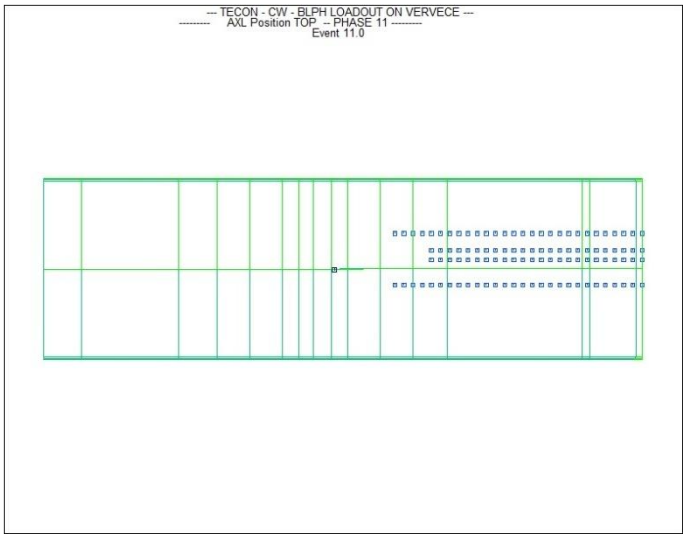
                                    Wet Radii Of Gyration About CG

                               K-X =     8.20 K-Y =    27.45 K-Z =    28.15

                                       GMT =    13.31 GML =   160.16

                               /-- Center of Gravity ---/  Sounding   % Full
                          Name  Weight    ---X---  ---Y---  ---Z---  -------- --------

                               ----------------  Part AXL11      ------------
                               LOAD_GRO   2071.00    17.93    -1.39     7.10
                               ----------------  Part CF         ------------
                               LOAD_GRO     28.00    69.38    11.22     8.10
                               ----------------  Part GRI&SF-B   ------------
                               LOAD_GRO     75.00    30.86    -1.14     7.35
                               ----------------  Part GRI&SF-C   ------------
                               LOAD_GRO      0.50    67.44    11.22     7.10
                               ----------------  Part GRI&SF-T   ------------
                               LOAD_GRO     45.00    65.20    -2.92     7.40
                               ----------------  Part TP         ------------
                               LOAD_GRO    254.50    65.54    -2.14     9.35
                               ----------------  Part VERVECE    ------------
                               LOAD_GRO   1832.80    47.02     0.00     3.52
                                            --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW       72.47    19.43   -10.24     0.26     0.51     8.30
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      175.60    19.43    10.27     0.62     1.23    20.10
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      244.10    40.01   -10.27     0.86     1.71    27.94
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      354.21    40.01    10.28     1.24     2.48    40.55
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      582.76    80.13   -10.28     2.44     4.61    73.43
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      694.20    80.29    10.28     2.85     5.40    87.48
                               ========  ========  =======  =======  =======
                               Total     10052.61    46.75     0.00     3.78
                               Buoyancy  10052.61    46.75     0.00     2.21
```




```
                    ********************************************************
*                                      ***  MOSES   ***                                                  *
*                                      ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                  *
*          ---------     Intact Stability Check    -- PHASE 11 ---------                                *
*                                                                                                       *
*************************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 11: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 11 ---------            .*
*                                                                                    *
**************************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 11: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.78, and Wind Speed = 10 Knots

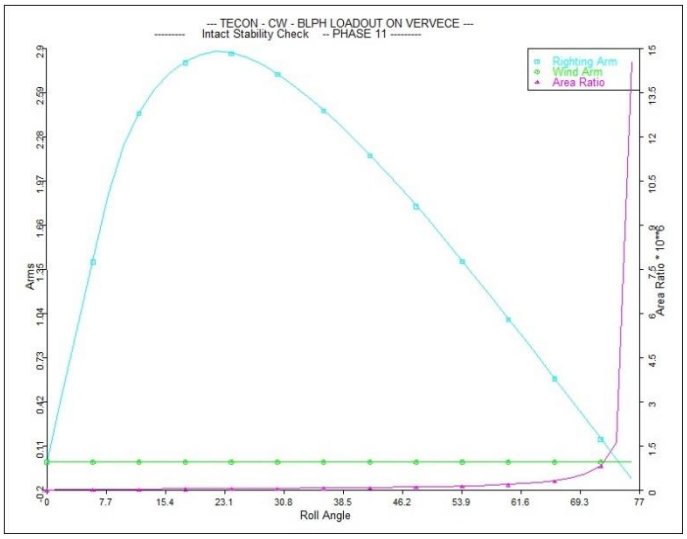
Initial: Roll = -0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *STEPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.47	0.47	0.00	0.00	2911.83	0.465
4.29	4.00	0.00	9999.00	1.49	0.93	1.87	0.00	0.00	5987.33	0.934
4.27	6.00	0.00	9999.00	1.03	1.41	4.21	0.00	0.00	9404.99	1.405
4.25	8.00	0.00	9999.00	0.57	1.87	7.48	0.00	0.00	9999.00	1.871
4.26	10.00	0.00	9999.00	0.07	2.21	11.57	0.00	0.00	9999.00	2.214
4.31	12.00	0.00	9999.00	-0.46	2.45	16.23	0.00	0.00	9999.00	2.448
4.39	14.00	0.00	9999.00	-1.04	2.61	21.29	0.00	0.00	9999.00	2.611
4.48	16.00	0.00	9999.00	-1.63	2.73	26.62	0.00	0.00	9999.00	2.725
4.60	18.00	0.00	9999.00	-2.25	2.80	32.15	0.00	0.00	9999.00	2.804
4.72	20.00	0.00	9999.00	-2.88	2.86	37.81	0.00	0.00	9999.00	2.855
4.85	22.00	0.00	9999.00	-3.51	2.88	43.54	0.00	0.00	9999.00	2.877
4.97	24.00	0.00	9999.00	-4.14	2.87	49.29	0.00	0.00	9999.00	2.868
5.09	26.00	0.00	9999.00	-4.77	2.84	54.99	0.00	0.00	9999.00	2.835
5.20	28.00	0.00	9999.00	-5.39	2.78	60.61	0.00	0.00	9999.00	2.785
5.31	30.00	0.00	9999.00	-6.01	2.72	66.12	0.00	0.00	9999.00	2.720
5.41	32.00	0.00	9999.00	-6.62	2.64	71.48	0.00	0.00	9999.00	2.644
5.50	34.00	0.00	9999.00	-7.22	2.56	76.68	0.00	0.00	9999.00	2.559
5.58	36.00	0.00	9999.00	-7.81	2.47	81.71	-0.00	0.00	9999.00	2.466
5.66	38.00	0.00	9999.00	-8.39	2.37	86.54	-0.00	0.00	9999.00	2.367
5.73	40.00	0.00	9999.00	-8.96	2.26	91.17	-0.00	0.00	9999.00	2.261
5.80	42.00	0.00	9999.00	-9.52	2.15	95.58	-0.00	0.00	9999.00	2.151
5.86	44.00	0.00	9999.00	-10.07	2.04	99.77	-0.00	0.00	9999.00	2.037
5.91	46.00	0.00	9999.00	-10.61	1.92	103.72	-0.00	0.00	9999.00	1.918
5.95	48.00	0.00	9999.00	-11.13	1.80	107.44	-0.00	0.00	9999.00	1.795
5.99	50.00	0.00	9999.00	-11.64	1.67	110.90	-0.00	0.00	9999.00	1.669
6.02	52.00	0.00	9999.00	-12.14	1.54	114.11	-0.00	0.00	9999.00	1.541
6.04	54.00	0.00	9999.00	-12.62	1.41	117.06	-0.00	0.00	9999.00	1.409
6.05	56.00	0.00	9999.00	-13.08	1.28	119.75	-0.00	0.00	9999.00	1.275
6.06	58.00	0.00	9999.00	-13.53	1.14	122.16	-0.00	0.00	9999.00	1.140
6.06	60.00	0.00	9999.00	-13.97	1.00	124.30	-0.00	0.00	9999.00	1.002
6.05	62.00	0.00	9999.00	-14.38	0.86	126.17	-0.00	0.00	9999.00	0.864
6.03	64.00	0.00	9999.00	-14.78	0.72	127.76	-0.00	0.00	9999.00	0.724
6.01	66.00	0.00	9999.00	-15.16	0.58	129.07	-0.00	0.00	9999.00	0.584
5.98	68.00	0.00	9999.00	-15.53	0.44	130.09	-0.00	0.00	9999.00	0.443
5.94	70.00	0.00	9999.00	-15.87	0.30	130.84	-0.00	0.00	9999.00	0.301
5.90	72.00	0.00	9999.00	-16.19	0.16	131.30	-0.00	0.00	9999.00	0.159
5.85	74.00	0.00	9999.00	-16.50	0.02	131.47	-0.00	0.00	9999.00	0.017
5.79	76.00	0.00	9999.00	-16.78	-0.13	131.37	-0.00	0.00	9999.00	-0.125

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 11
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10**6
Roll Angle
0
7.7
15.4
23.1
30.8
38.5
46.2
53.9
61.6
69.3
77

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 11 ------ *
*                                                                                    *
**************************************************************************************************************
```

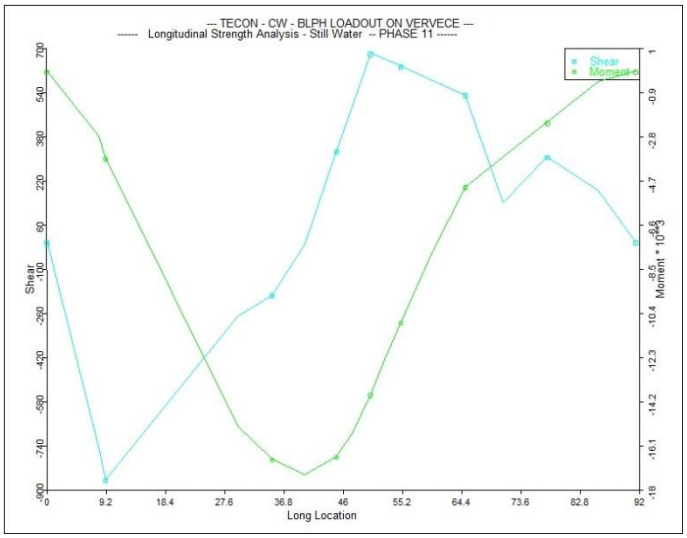
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 11: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-745	-2796	-0.1105	15.1046
9.14	-863	-3728	-0.1474	17.2279
29.72	-271	-15264	-0.6032	47.1863
35.00	-193	-16674	-0.6589	50.9196
40.00	-9	-17351	-0.6857	52.5730
45.00	327	-16559	-0.6544	52.3280
47.50	495	-15532	-0.6138	51.5141
50.29	682	-13889	-0.5489	50.1022
52.50	660	-12408	-0.4903	48.6447
55.00	634	-10790	-0.4264	46.6739
60.00	583	-7747	-0.3062	41.8832
65.00	530	-4964	-0.1962	36.2358
70.87	140	-3691	-0.1459	28.8959
77.72	307	-2202	-0.0871	19.6174
85.70	184	-445	-0.0176	8.2746
91.44	-1	0	0.0000	0.0002



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------                  1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 12 ---------              *
*                                                                                    *
**************************************************************************************************************

                +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                ======================================================================

                Process is 12: Units Are Degrees, Meters, and M-Tons Unless Specified

                                Results Are Reported In Body System

                    Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =    -0.00

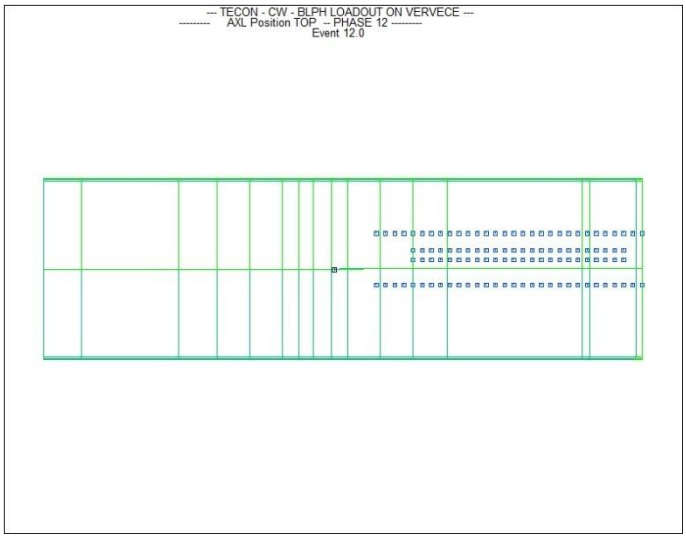
                                Wet Radii Of Gyration About CG

                              K-X =     8.15 K-Y =    27.18 K-Z =    27.87

                                       GMT =    13.27 GML =   160.10

                              /-- Center of Gravity ---/  Sounding   % Full
                        Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                              ----------------  Part AXL12      ------------
                              LOAD_GRO   2176.20    19.77    -1.37     7.10
                              ----------------  Part CF         ------------
                              LOAD_GRO     28.00    69.38    11.22     8.10
                              ----------------  Part GRI&SF-B   ------------
                              LOAD_GRO     75.00    30.86    -1.14     7.35
                              ----------------  Part GRI&SF-C   ------------
                              LOAD_GRO      0.50    67.44    11.22     7.10
                              ----------------  Part GRI&SF-T   ------------
                              LOAD_GRO     45.00    65.20    -2.92     7.40
                              ----------------  Part TP         ------------
                              LOAD_GRO    254.50    65.54    -2.14     9.35
                              ----------------  Part VERVECE    ------------
                              LOAD_GRO   1832.80    47.02     0.00     3.52
                                           --- Contents ---
                        1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                        1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                        1SC      230.42     5.62     3.43     3.77     6.02    98.00
                        1SW      117.49     6.50    10.28     2.53     4.06    50.00
                        2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                        2PW       72.47    19.43   -10.24     0.26     0.51     8.30
                        2SC       26.21    19.43     3.43     0.09     0.18     3.00
                        2SW      175.60    19.43    10.27     0.62     1.23    20.10
                        3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                        3PW      209.88    40.00   -10.27     0.74     1.47    24.02
                        3SC       26.21    40.01     3.43     0.09     0.18     3.00
                        3SW      325.11    40.00    10.28     1.14     2.27    37.21
                        4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                        4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                        4SC      262.11    60.58     3.43     0.91     1.83    30.00
                        4SW      856.16    60.58    10.28     2.99     5.97    98.00
                        5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                        5PW      559.17    80.09   -10.28     2.36     4.45    70.46
                        5SC      290.58    83.42     3.43     2.16     3.96    60.00
                        5SW      675.91    80.27    10.28     2.79     5.27    85.17
                              ========  ========  =======  =======  =======
                              Total     10052.61    46.75     0.00     3.83
                              Buoyancy  10052.61    46.75     0.00     2.21
```




```
                    ********************************************************
*                                       ***  MOSES   ***                                                  *
*                                       ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                    *
*          ---------     Intact Stability Check    -- PHASE 12 ---------                                  *
*                                                                                                         *
***********************************************************************************************************

                              +++ D R A F T   M A R K   R E A D I N G S +++
                              ============================================

                  Process is 12: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 12 ---------                             .*
*                                                                                                    *
******************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 12: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.83, and Wind Speed = 10 Knots

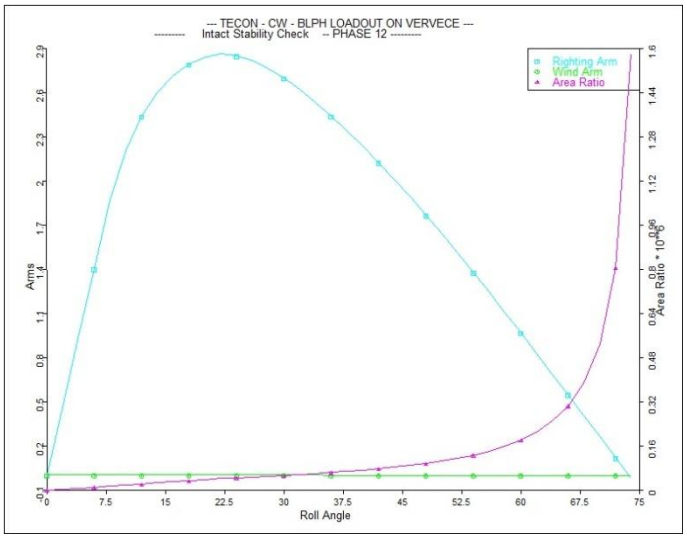
Initial: Roll = -0.00, Trim = -0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.46	0.46	0.00	0.00	2902.86	0.464
4.29	4.00	0.00	9999.00	1.48	0.93	1.86	0.00	0.00	5968.94	0.932
4.27	6.00	0.00	9999.00	1.03	1.40	4.19	0.00	0.00	9376.14	1.401
4.25	8.00	0.00	9999.00	0.57	1.86	7.46	0.00	0.00	9999.00	1.865
4.26	10.00	0.00	9999.00	0.07	2.21	11.53	0.00	0.00	9999.00	2.207
4.31	12.00	0.00	9999.00	-0.47	2.44	16.18	0.00	0.00	9999.00	2.439
4.39	14.00	0.00	9999.00	-1.04	2.60	21.22	0.00	0.00	9999.00	2.600
4.49	16.00	0.00	9999.00	-1.63	2.71	26.53	0.00	0.00	9999.00	2.713
4.60	18.00	0.00	9999.00	-2.25	2.79	32.03	0.00	0.00	9999.00	2.790
4.72	20.00	0.00	9999.00	-2.88	2.84	37.66	0.00	0.00	9999.00	2.840
4.85	22.00	0.00	9999.00	-3.51	2.86	43.36	0.00	0.00	9999.00	2.859
4.97	24.00	0.00	9999.00	-4.15	2.85	49.07	0.00	0.00	9999.00	2.849
5.09	26.00	0.00	9999.00	-4.77	2.82	54.73	0.00	0.00	9999.00	2.815
5.20	28.00	0.00	9999.00	-5.40	2.76	60.31	0.00	0.00	9999.00	2.763
5.31	30.00	0.00	9999.00	-6.01	2.70	65.77	0.00	0.00	9999.00	2.697
5.41	32.00	0.00	9999.00	-6.62	2.62	71.09	0.00	0.00	9999.00	2.620
5.50	34.00	0.00	9999.00	-7.22	2.53	76.24	0.00	0.00	9999.00	2.534
5.59	36.00	0.00	9999.00	-7.81	2.44	81.22	-0.00	0.00	9999.00	2.440
5.66	38.00	0.00	9999.00	-8.39	2.34	86.00	-0.00	0.00	9999.00	2.340
5.74	40.00	0.00	9999.00	-8.96	2.23	90.57	-0.00	0.00	9999.00	2.234
5.80	42.00	0.00	9999.00	-9.52	2.12	94.93	-0.00	0.00	9999.00	2.123
5.86	44.00	0.00	9999.00	-10.07	2.01	99.06	-0.00	0.00	9999.00	2.008
5.91	46.00	0.00	9999.00	-10.61	1.89	102.95	-0.00	0.00	9999.00	1.889
5.95	48.00	0.00	9999.00	-11.13	1.77	106.61	-0.00	0.00	9999.00	1.765
5.99	50.00	0.00	9999.00	-11.64	1.64	110.01	-0.00	0.00	9999.00	1.639
6.02	52.00	0.00	9999.00	-12.14	1.51	113.16	-0.00	0.00	9999.00	1.509
6.04	54.00	0.00	9999.00	-12.62	1.38	116.04	-0.00	0.00	9999.00	1.377
6.05	56.00	0.00	9999.00	-13.09	1.24	118.66	-0.00	0.00	9999.00	1.242
6.06	58.00	0.00	9999.00	-13.54	1.11	121.01	-0.00	0.00	9999.00	1.106
6.06	60.00	0.00	9999.00	-13.97	0.97	123.08	-0.00	0.00	9999.00	0.968
6.05	62.00	0.00	9999.00	-14.38	0.83	124.88	-0.00	0.00	9999.00	0.828
6.03	64.00	0.00	9999.00	-14.78	0.69	126.40	-0.00	0.00	9999.00	0.688
6.01	66.00	0.00	9999.00	-15.16	0.55	127.63	-0.00	0.00	9999.00	0.547
5.98	68.00	0.00	9999.00	-15.53	0.40	128.58	-0.00	0.00	9999.00	0.405
5.94	70.00	0.00	9999.00	-15.87	0.26	129.25	-0.00	0.00	9999.00	0.262
5.90	72.00	0.00	9999.00	-16.19	0.12	129.63	-0.00	0.00	9999.00	0.120
5.85	74.00	0.00	9999.00	-16.50	-0.02	129.73	-0.00	0.00	9999.00	-0.023

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 12 ---
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
7.5
15
22.5
30
37.5
45
52.5
60
67.5
75

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 12 ------ *
*                                                                                    *
**************************************************************************************************************
```

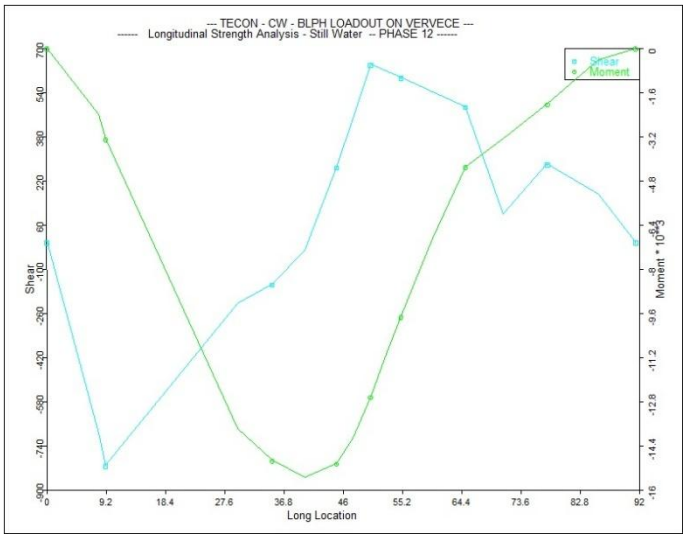
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 12: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-692	-2411	-0.0953	13.6131
9.14	-810	-3283	-0.1298	15.5293
29.72	-222	-13780	-0.5445	42.5330
35.00	-153	-14923	-0.5897	45.8798
40.00	-30	-15531	-0.6137	47.3625
45.00	270	-15032	-0.5940	47.1426
47.50	445	-14138	-0.5587	46.4064
50.29	641	-12621	-0.4988	45.1263
52.50	619	-11230	-0.4438	43.8046
55.00	593	-9715	-0.3839	42.0179
60.00	542	-6877	-0.2718	37.6808
65.00	489	-4299	-0.1699	32.5832
70.87	98	-3267	-0.1291	25.9802
77.72	280	-2014	-0.0796	17.6427
85.70	173	-412	-0.0163	7.4431
91.44	-1	0	0.0000	0.0002



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 13 ---------              *
*                                                                                    *
**************************************************************************************************************

                  +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                  ====================================================================

                  Process is 13: Units Are Degrees, Meters, and M-Tons Unless Specified

                                 Results Are Reported In Body System

                      Draft =     4.30 Roll Angle =    -0.00 Pitch Angle =    -0.00

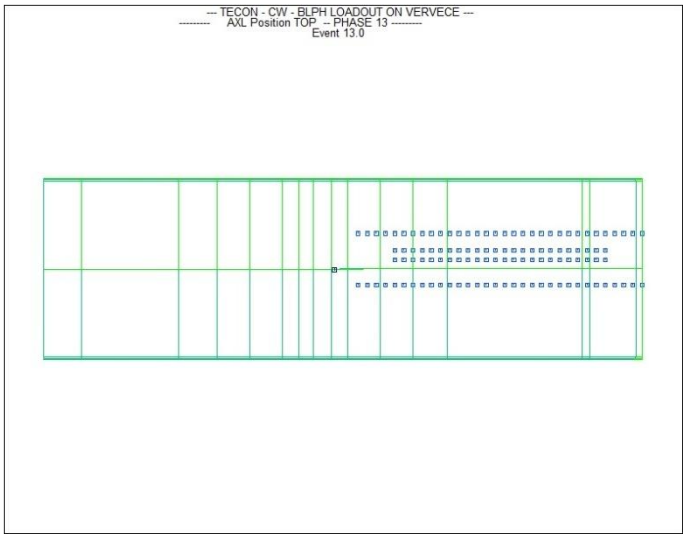
                                   Wet Radii Of Gyration About CG

                               K-X =     8.10 K-Y =    26.91 K-Z =    27.58

                                        GMT =    13.22 GML =   160.02

                               /-- Center of Gravity ---/  Sounding   % Full
                          Name  Weight    ---X---  ---Y---  ---Z---  -------- --------

                               ----------------  Part AXL13      ------------
                               LOAD_GRO   2281.40    21.56    -1.36     7.10
                               ----------------  Part CF         ------------
                               LOAD_GRO     28.00    69.38    11.22     8.10
                               ----------------  Part GRI&SF-B   ------------
                               LOAD_GRO     75.00    30.86    -1.14     7.35
                               ----------------  Part GRI&SF-C   ------------
                               LOAD_GRO      0.50    67.44    11.22     7.10
                               ----------------  Part GRI&SF-T   ------------
                               LOAD_GRO     45.00    65.20    -2.92     7.40
                               ----------------  Part TP         ------------
                               LOAD_GRO    254.50    65.54    -2.14     9.35
                               ----------------  Part VERVECE    ------------
                               LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                          1PC      229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW      117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC      230.42     5.62     3.43     3.77     6.02    98.00
                          1SW      117.49     6.50    10.28     2.53     4.06    50.00
                          2PC       26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW       72.47    19.43   -10.24     0.26     0.51     8.30
                          2SC       26.21    19.43     3.43     0.09     0.18     3.00
                          2SW      175.60    19.43    10.27     0.62     1.23    20.10
                          3PC       26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW      178.62    40.00   -10.27     0.63     1.25    20.45
                          3SC       26.21    40.01     3.43     0.09     0.18     3.00
                          3SW      298.96    40.00    10.28     1.05     2.09    34.22
                          4PC      262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW      856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC      262.11    60.58     3.43     0.91     1.83    30.00
                          4SW      856.16    60.58    10.28     2.99     5.97    98.00
                          5PC      295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW      532.62    80.03   -10.28     2.26     4.26    67.12
                          5SC      290.58    83.42     3.43     2.16     3.96    60.00
                          5SW      654.67    80.24    10.28     2.71     5.12    82.50
                               ========  ========  =======  =======  =======
                               Total     10052.61    46.75     0.00     3.87
                               Buoyancy  10052.61    46.75     0.00     2.21
```




```
                    ********************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                    1 July, 2025                 *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 13 ---------                             *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 13: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 13 ---------                             .*
*                                                                                                    *
******************************************************************************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 13: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.87, and Wind Speed = 10 Knots

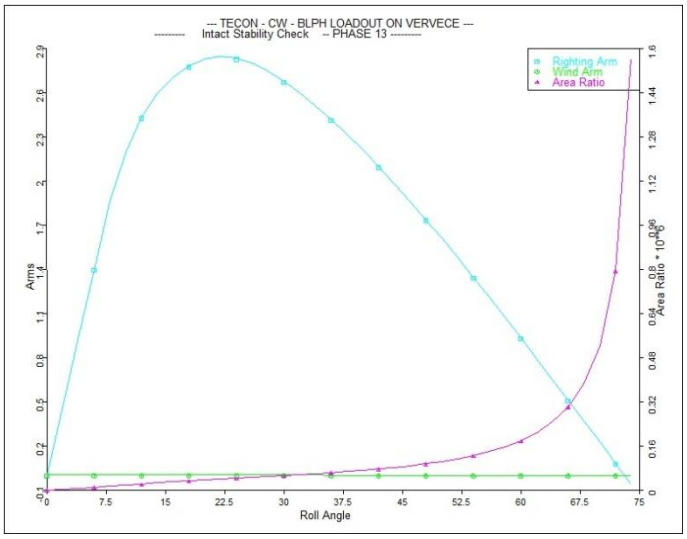
Initial: Roll = -0.00, Trim = -0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.39	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.46	0.46	0.00	0.00	2893.72	0.463
4.29	4.00	0.00	9999.00	1.48	0.93	1.85	0.00	0.00	5950.19	0.929
4.27	6.00	0.00	9999.00	1.03	1.40	4.18	0.00	0.00	9346.74	1.397
4.25	8.00	0.00	9999.00	0.57	1.86	7.43	0.00	0.00	9999.00	1.859
4.26	10.00	0.00	9999.00	0.07	2.20	11.49	0.00	0.00	9999.00	2.200
4.31	12.00	0.00	9999.00	-0.47	2.43	16.12	0.00	0.00	9999.00	2.430
4.39	14.00	0.00	9999.00	-1.04	2.59	21.14	0.00	0.00	9999.00	2.590
4.49	16.00	0.00	9999.00	-1.63	2.70	26.43	0.00	0.00	9999.00	2.701
4.60	18.00	0.00	9999.00	-2.25	2.78	31.91	0.00	0.00	9999.00	2.777
4.72	20.00	0.00	9999.00	-2.88	2.82	37.51	0.00	0.00	9999.00	2.824
4.85	22.00	0.00	9999.00	-3.51	2.84	43.18	0.00	0.00	9999.00	2.842
4.98	24.00	0.00	9999.00	-4.15	2.83	48.85	0.00	0.00	9999.00	2.831
5.09	26.00	0.00	9999.00	-4.77	2.80	54.48	0.00	0.00	9999.00	2.796
5.20	28.00	0.00	9999.00	-5.40	2.74	60.02	0.00	0.00	9999.00	2.743
5.31	30.00	0.00	9999.00	-6.01	2.68	65.44	0.00	0.00	9999.00	2.675
5.41	32.00	0.00	9999.00	-6.62	2.60	70.71	0.00	0.00	9999.00	2.597
5.50	34.00	0.00	9999.00	-7.22	2.51	75.82	0.00	0.00	9999.00	2.509
5.59	36.00	0.00	9999.00	-7.81	2.41	80.74	-0.00	0.00	9999.00	2.414
5.66	38.00	0.00	9999.00	-8.39	2.31	85.47	-0.00	0.00	9999.00	2.313
5.74	40.00	0.00	9999.00	-8.96	2.21	89.99	-0.00	0.00	9999.00	2.207
5.80	42.00	0.00	9999.00	-9.52	2.10	94.29	-0.00	0.00	9999.00	2.095
5.86	44.00	0.00	9999.00	-10.07	1.98	98.36	-0.00	0.00	9999.00	1.979
5.91	46.00	0.00	9999.00	-10.61	1.86	102.20	-0.00	0.00	9999.00	1.859
5.95	48.00	0.00	9999.00	-11.13	1.73	105.79	-0.00	0.00	9999.00	1.735
5.99	50.00	0.00	9999.00	-11.64	1.61	109.14	-0.00	0.00	9999.00	1.607
6.02	52.00	0.00	9999.00	-12.14	1.48	112.22	-0.00	0.00	9999.00	1.477
6.04	54.00	0.00	9999.00	-12.62	1.34	115.04	-0.00	0.00	9999.00	1.344
6.05	56.00	0.00	9999.00	-13.09	1.21	117.59	-0.00	0.00	9999.00	1.208
6.06	58.00	0.00	9999.00	-13.54	1.07	119.87	-0.00	0.00	9999.00	1.071
6.06	60.00	0.00	9999.00	-13.97	0.93	121.87	-0.00	0.00	9999.00	0.932
6.05	62.00	0.00	9999.00	-14.38	0.79	123.60	-0.00	0.00	9999.00	0.793
6.03	64.00	0.00	9999.00	-14.78	0.65	125.04	-0.00	0.00	9999.00	0.652
6.01	66.00	0.00	9999.00	-15.16	0.51	126.20	-0.00	0.00	9999.00	0.509
5.98	68.00	0.00	9999.00	-15.53	0.37	127.08	-0.00	0.00	9999.00	0.367
5.94	70.00	0.00	9999.00	-15.87	0.22	127.67	-0.00	0.00	9999.00	0.224
5.90	72.00	0.00	9999.00	-16.19	0.08	127.98	-0.00	0.00	9999.00	0.080
5.85	74.00	0.00	9999.00	-16.50	-0.06	127.99	-0.00	0.00	9999.00	-0.063

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 13 ---
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
7.5
15
22.5
30
37.5
45
52.5
60
67.5
75

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 13 ------ *
*                                                                                    *
**************************************************************************************************************
```

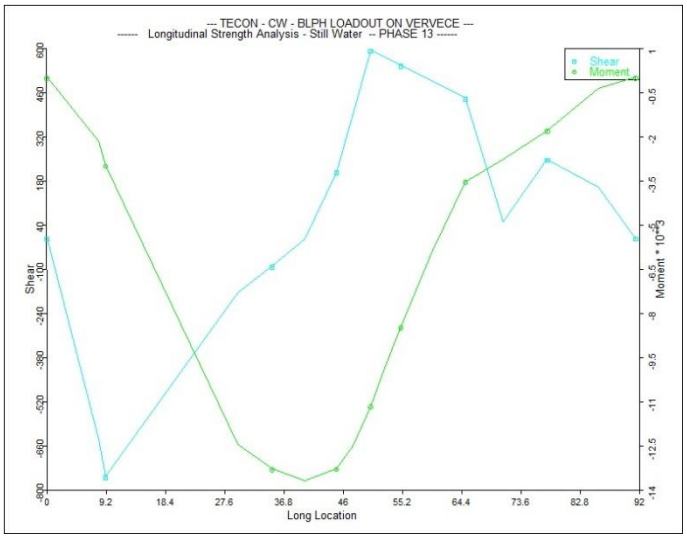
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 13: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-639	-2175	-0.0860	12.1769
9.14	-758	-2986	-0.1180	13.8907
29.72	-174	-12442	-0.4917	37.8792
35.00	-90	-13292	-0.5253	40.7800
40.00	-5	-13697	-0.5413	42.0245
45.00	207	-13268	-0.5243	41.7672
47.50	390	-12522	-0.4949	41.0868
50.29	593	-11149	-0.4406	39.9215
52.50	571	-9864	-0.3898	38.7265
55.00	546	-8468	-0.3346	37.1187
60.00	494	-5868	-0.2319	33.2394
65.00	442	-3529	-0.1395	28.7107
70.87	51	-2776	-0.1097	22.8815
77.72	248	-1796	-0.0710	15.5412
85.70	159	-374	-0.0148	6.5578
91.44	-1	0	0.0000	0.0001



```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*         ---------     Intact Stability Check    -- PHASE 14 ---------                             *
*                                                                                                    *
******************************************************************************************************

                +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                ======================================================================

                Process is 14: Units Are Degrees, Meters, and M-Tons Unless Specified

                              Results Are Reported In Body System

                    Draft =     4.30 Roll Angle =     0.00 Pitch Angle =     0.00

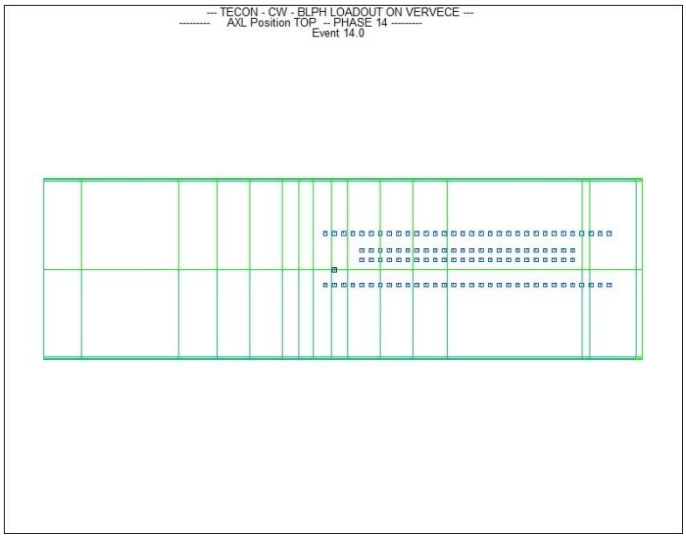
                                 Wet Radii Of Gyration About CG

                           K-X =     8.11 K-Y =    25.77 K-Z =    26.48

                                    GMT =    13.29 GML =   159.88

                           /-- Center of Gravity ---/  Sounding   % Full
                  Name      Weight    ---X---  ---Y---  ---Z---  -------- --------

                           ----------------  Part AXL14      ------------
                           LOAD_GRO   2281.40    26.56    -1.36     7.10
                           ----------------  Part CF         ------------
                           LOAD_GRO     28.00    69.38    11.22     8.10
                           ----------------  Part GRI&SF-B   ------------
                           LOAD_GRO     75.00    30.86    -1.14     7.35
                           ----------------  Part GRI&SF-C   ------------
                           LOAD_GRO      0.50    67.44    11.22     7.10
                           ----------------  Part GRI&SF-T   ------------
                           LOAD_GRO     45.00    65.20    -2.92     7.40
                           ----------------  Part TP         ------------
                           LOAD_GRO    254.50    65.54    -2.14     9.35
                           ----------------  Part VERVECE    ------------
                           LOAD_GRO   1832.80    47.02     0.00     3.52
                                        --- Contents ---
                    1PC         229.92     5.62    -3.43     3.77     6.02    98.00
                    1PW         117.49     6.50   -10.28     2.53     4.06    50.00
                    1SC         230.42     5.62     3.43     3.77     6.02    98.00
                    1SW         117.49     6.50    10.28     2.53     4.06    50.00
                    2PC          26.21    19.43    -3.43     0.09     0.18     3.00
                    2PW         160.09    19.43   -10.26     0.56     1.12    18.32
                    2SC          26.21    19.43     3.43     0.09     0.18     3.00
                    2SW         271.97    19.43    10.27     0.95     1.90    31.13
                    3PC          26.21    40.00    -3.43     0.09     0.18     3.00
                    3PW         178.62    40.01   -10.27     0.63     1.25    20.45
                    3SC          26.21    40.01     3.43     0.09     0.18     3.00
                    3SW         298.96    40.01    10.28     1.05     2.09    34.22
                    4PC         262.11    60.58    -3.43     0.91     1.83    30.00
                    4PW         856.16    60.58   -10.28     2.99     5.97    98.00
                    4SC         262.11    60.58     3.43     0.91     1.83    30.00
                    4SW         856.16    60.58    10.28     2.99     5.97    98.00
                    5PC         295.21    83.42    -3.43     2.16     3.96    60.00
                    5PW         445.01    79.81   -10.28     1.92     3.64    56.08
                    5SC         290.58    83.42     3.43     2.16     3.96    60.00
                    5SW         558.29    80.08    10.28     2.35     4.44    70.35
                           ========  ========  =======  =======  =======
                           Total     10052.61    46.75     0.00     3.81
                           Buoyancy  10052.61    46.75    -0.00     2.21
```




```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                        1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                               *
*          ---------     Intact Stability Check    -- PHASE 14 ---------                             *
*                                                                                                     *
*******************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 14: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 14 ---------            .*
*                                                                                    *
**********************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 14: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.81, and Wind Speed = 10 Knots

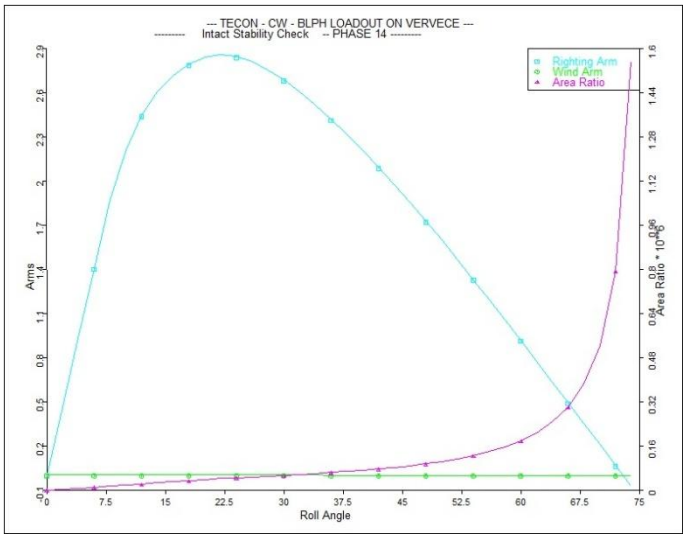
Initial: Roll = 0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.46	0.46	0.00	0.00	2906.27	0.465
4.29	4.00	0.00	9999.00	1.49	0.93	1.86	0.00	0.00	5976.07	0.933
4.27	6.00	0.00	9999.00	1.03	1.40	4.20	0.00	0.00	9387.45	1.403
4.25	8.00	0.00	9999.00	0.57	1.87	7.47	0.00	0.00	9999.00	1.867
4.26	10.00	0.00	9999.00	0.08	2.21	11.54	0.00	0.00	9999.00	2.210
4.31	12.00	0.00	9999.00	-0.46	2.44	16.20	0.00	0.00	9999.00	2.441
4.39	14.00	0.00	9999.00	-1.04	2.60	21.24	0.00	0.00	9999.00	2.602
4.48	16.00	0.00	9999.00	-1.63	2.71	26.56	0.00	0.00	9999.00	2.714
4.60	18.00	0.00	9999.00	-2.25	2.79	32.06	0.00	0.00	9999.00	2.790
4.72	20.00	0.00	9999.00	-2.88	2.84	37.69	0.00	0.00	9999.00	2.837
4.85	22.00	0.00	9999.00	-3.51	2.86	43.38	0.00	0.00	9999.00	2.855
4.97	24.00	0.00	9999.00	-4.14	2.84	49.08	0.00	0.00	9999.00	2.843
5.09	26.00	0.00	9999.00	-4.77	2.81	54.73	0.00	0.00	9999.00	2.806
5.20	28.00	0.00	9999.00	-5.39	2.75	60.28	0.00	0.00	9999.00	2.752
5.31	30.00	0.00	9999.00	-6.01	2.68	65.72	0.00	0.00	9999.00	2.683
5.41	32.00	0.00	9999.00	-6.62	2.60	71.00	0.00	0.00	9999.00	2.603
5.50	34.00	0.00	9999.00	-7.22	2.51	76.12	0.00	0.00	9999.00	2.513
5.58	36.00	0.00	9999.00	-7.81	2.42	81.05	-0.00	0.00	9999.00	2.416
5.66	38.00	0.00	9999.00	-8.39	2.31	85.78	-0.00	0.00	9999.00	2.313
5.73	40.00	0.00	9999.00	-8.96	2.20	90.29	-0.00	0.00	9999.00	2.204
5.80	42.00	0.00	9999.00	-9.52	2.09	94.59	-0.00	0.00	9999.00	2.090
5.86	44.00	0.00	9999.00	-10.07	1.97	98.65	-0.00	0.00	9999.00	1.972
5.91	46.00	0.00	9999.00	-10.61	1.85	102.47	-0.00	0.00	9999.00	1.850
5.95	48.00	0.00	9999.00	-11.13	1.72	106.05	-0.00	0.00	9999.00	1.724
5.99	50.00	0.00	9999.00	-11.64	1.60	109.37	-0.00	0.00	9999.00	1.595
6.02	52.00	0.00	9999.00	-12.14	1.46	112.42	-0.00	0.00	9999.00	1.463
6.04	54.00	0.00	9999.00	-12.62	1.33	115.22	-0.00	0.00	9999.00	1.329
6.05	56.00	0.00	9999.00	-13.08	1.19	117.74	-0.00	0.00	9999.00	1.192
6.06	58.00	0.00	9999.00	-13.53	1.05	119.98	-0.00	0.00	9999.00	1.054
6.06	60.00	0.00	9999.00	-13.97	0.92	121.95	-0.00	0.00	9999.00	0.915
6.05	62.00	0.00	9999.00	-14.38	0.78	123.64	-0.00	0.00	9999.00	0.775
6.03	64.00	0.00	9999.00	-14.78	0.63	125.05	-0.00	0.00	9999.00	0.634
6.01	66.00	0.00	9999.00	-15.16	0.49	126.18	-0.00	0.00	9999.00	0.493
5.98	68.00	0.00	9999.00	-15.53	0.35	127.02	-0.00	0.00	9999.00	0.350
5.94	70.00	0.00	9999.00	-15.87	0.21	127.58	-0.00	0.00	9999.00	0.208
5.90	72.00	0.00	9999.00	-16.19	0.07	127.85	-0.00	0.00	9999.00	0.066
5.85	74.00	0.00	9999.00	-16.50	-0.08	127.84	-0.00	0.00	9999.00	-0.076

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 14 ---
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
7.5
15
22.5
30
37.5
45
52.5
60
67.5
75

```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025         *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ------   Longitudinal Strength Analysis - Still Water  -- PHASE 14 ------   *
*                                                                                    *
**************************************************************************************************************
```

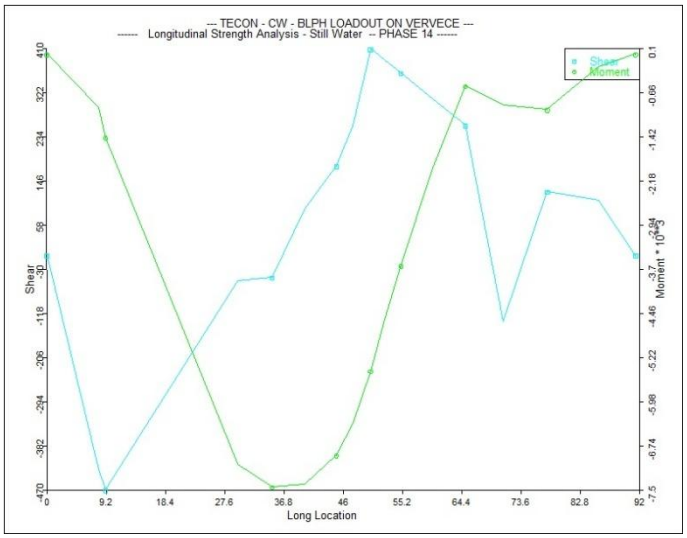
+++ L O N G I T U D I N A L S T R E N G T H R E S U L T S +++

Process is 14: Units Are Degrees, Meters, and M-Tons Unless Specified

Allowable Stress = 155.00 Mpa

Allowable Deflection = 1.00 MM

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-429	-921	-0.0364	6.4035
9.14	-469	-1434	-0.0567	7.3096
29.72	-52	-7056	-0.2789	19.7886
35.00	-45	-7446	-0.2943	21.1395
40.00	91	-7401	-0.2925	21.5796
45.00	176	-6899	-0.2726	21.2071
47.50	256	-6353	-0.2511	20.7320
50.29	409	-5450	-0.2154	19.9960
52.50	386	-4572	-0.1807	19.2799
55.00	361	-3638	-0.1438	18.3512
60.00	309	-1962	-0.0776	16.2170
65.00	257	-546	-0.0216	13.8638
70.87	-133	-877	-0.0347	10.9985
77.72	125	-951	-0.0376	7.4804
85.70	108	-226	-0.0090	3.1618
91.44	-1	0	0.0000	0.0001



```
*******************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------                 1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- PHASE 15 ---------              *
*                                                                                    *
**************************************************************************************************************************

                    +++ B U O Y A N C Y   A N D   W E I G H T   F O R   V E R V E C E +++
                    ====================================================================

                    Process is 15: Units Are Degrees, Meters, and M-Tons Unless Specified

                                  Results Are Reported In Body System

                        Draft =     4.30 Roll Angle =     0.00 Pitch Angle =     0.00

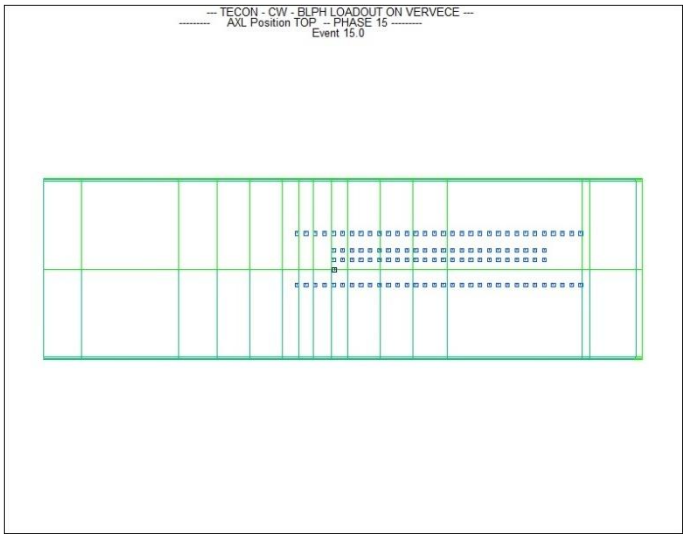
                                    Wet Radii Of Gyration About CG

                                K-X =     8.12 K-Y =    24.92 K-Z =    25.65

                                    GMT =    13.32 GML =   160.00

                                /-- Center of Gravity ---/  Sounding   % Full
                          Name   Weight    ---X---  ---Y---  ---Z---  -------- --------

                                ----------------  Part AXL15      ------------
                                LOAD_GRO   2281.40    30.92    -1.36     7.10
                                ----------------  Part CF         ------------
                                LOAD_GRO     28.00    69.38    11.22     8.10
                                ----------------  Part GRI&SF-B   ------------
                                LOAD_GRO     75.00    30.86    -1.14     7.35
                                ----------------  Part GRI&SF-C   ------------
                                LOAD_GRO      0.50    67.44    11.22     7.10
                                ----------------  Part GRI&SF-T   ------------
                                LOAD_GRO     45.00    65.20    -2.92     7.40
                                ----------------  Part TP         ------------
                                LOAD_GRO    254.50    65.54    -2.14     9.35
                                ----------------  Part VERVECE    ------------
                                LOAD_GRO   1832.80    47.02     0.00     3.52
                                             --- Contents ---
                          1PC       229.92     5.62    -3.43     3.77     6.02    98.00
                          1PW       117.49     6.50   -10.28     2.53     4.06    50.00
                          1SC       230.42     5.62     3.43     3.77     6.02    98.00
                          1SW       117.49     6.50    10.28     2.53     4.06    50.00
                          2PC        26.21    19.43    -3.43     0.09     0.18     3.00
                          2PW       240.63    19.43   -10.27     0.84     1.68    27.54
                          2SC        26.21    19.43     3.43     0.09     0.18     3.00
                          2SW       352.84    19.43    10.28     1.24     2.47    40.39
                          3PC        26.21    40.00    -3.43     0.09     0.18     3.00
                          3PW       178.62    40.01   -10.27     0.63     1.25    20.45
                          3SC        26.21    40.01     3.43     0.09     0.18     3.00
                          3SW       298.96    40.01    10.28     1.05     2.09    34.22
                          4PC       262.11    60.58    -3.43     0.91     1.83    30.00
                          4PW       856.16    60.58   -10.28     2.99     5.97    98.00
                          4SC       262.11    60.58     3.43     0.91     1.83    30.00
                          4SW       856.16    60.58    10.28     2.99     5.97    98.00
                          5PC       295.21    83.42    -3.43     2.16     3.96    60.00
                          5PW       364.46    79.56   -10.28     1.61     3.06    45.93
                          5SC       290.58    83.42     3.43     2.16     3.96    60.00
                          5SW       477.42    79.90    10.28     2.05     3.87    60.16
                                ========  ========  =======  =======  =======
                                Total     10052.61    46.75    -0.00     3.78
                                Buoyancy  10052.61    46.75    -0.00     2.21
```




```
                    ******************************************************
*                                   ***  MOSES   ***                                                  *
*                                   ----------------                        1 July, 2025             *
*          --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                                *
*          ---------     Intact Stability Check    -- PHASE 15 ---------                             *
*                                                                                                      *
********************************************************************************************************

                          +++ D R A F T   M A R K   R E A D I N G S +++
                          ============================================

                Process is 15: Units Are Degrees, Meters, and M-Tons Unless Specified

  Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft    Name     Draft
-------- -------- -------- -------- -------- -------- -------- -------- -------- -------- -------- --------

BOWPO        4.30 BOWST        4.30 MIDPO        4.30 MIDST        4.30 STEPO        4.30 STEST        4.30
```

```
**********************************************************
*                                  ***  MOSES   ***                                  *
*                                  ----------------          1 July, 2025          *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                               *
*         ---------     Intact Stability Check    -- PHASE 15 ---------            .*
*                                                                                    *
**********************************************************
```

+++ R I G H T I N G A R M R E S U L T S +++

Process is 15: Units Are Degrees, Meters, and M-Tons Unless Specified

Moment Scaled By 10052.61, KG = 3.78, and Wind Speed = 10 Knots

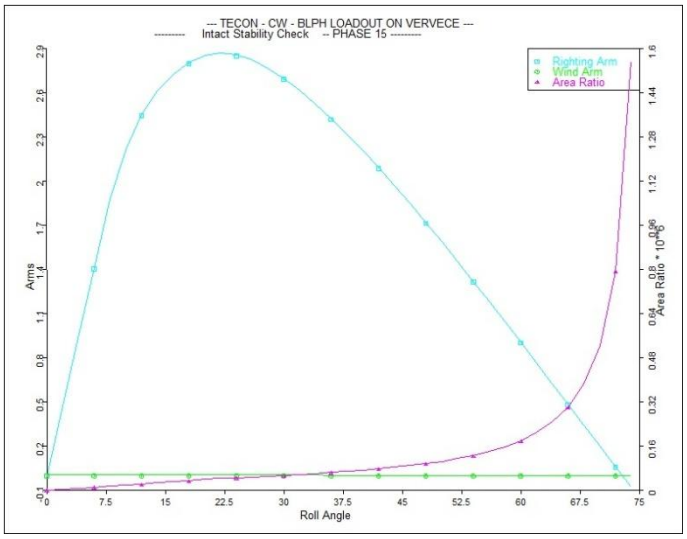
Initial: Roll = 0.00, Trim = 0.00 Deg.

Critical NWT Down Flooding Point Is *BOWPTWT

Arms About Axis Yawed 0.0 Deg From Vessel X

/----- Condition -----/			/-- Min. Height --/		/--- Righting ---/		/--- Heeling ---/		Area	Net
Draft	Roll	Trim	W Tight	NW Tight	Arm	Area	Arm	Area	Ratio	Arm
4.30	0.00	0.00	9999.00	2.40	-0.00	0.00	0.00	0.00	0.00	-0.000
4.30	2.00	0.00	9999.00	1.94	0.47	0.47	0.00	0.00	2913.63	0.466
4.29	4.00	0.00	9999.00	1.49	0.94	1.87	0.00	0.00	5991.18	0.935
4.27	6.00	0.00	9999.00	1.03	1.41	4.21	0.00	0.00	9411.11	1.406
4.25	8.00	0.00	9999.00	0.57	1.87	7.49	0.00	0.00	9999.00	1.872
4.26	10.00	0.00	9999.00	0.08	2.22	11.57	0.00	0.00	9999.00	2.216
4.31	12.00	0.00	9999.00	-0.46	2.45	16.24	0.00	0.00	9999.00	2.448
4.39	14.00	0.00	9999.00	-1.04	2.61	21.30	0.00	0.00	9999.00	2.610
4.48	16.00	0.00	9999.00	-1.63	2.72	26.63	0.00	0.00	9999.00	2.723
4.60	18.00	0.00	9999.00	-2.25	2.80	32.15	0.00	0.00	9999.00	2.800
4.72	20.00	0.00	9999.00	-2.88	2.85	37.80	0.00	0.00	9999.00	2.849
4.85	22.00	0.00	9999.00	-3.51	2.87	43.52	0.00	0.00	9999.00	2.867
4.97	24.00	0.00	9999.00	-4.14	2.86	49.24	0.00	0.00	9999.00	2.855
5.09	26.00	0.00	9999.00	-4.77	2.82	54.91	0.00	0.00	9999.00	2.819
5.20	28.00	0.00	9999.00	-5.39	2.76	60.50	0.00	0.00	9999.00	2.764
5.31	30.00	0.00	9999.00	-6.01	2.69	65.96	0.00	0.00	9999.00	2.694
5.41	32.00	0.00	9999.00	-6.62	2.61	71.26	0.00	0.00	9999.00	2.613
5.50	34.00	0.00	9999.00	-7.22	2.52	76.40	0.00	0.00	9999.00	2.521
5.58	36.00	0.00	9999.00	-7.81	2.42	81.34	-0.00	0.00	9999.00	2.422
5.66	38.00	0.00	9999.00	-8.39	2.32	86.08	-0.00	0.00	9999.00	2.317
5.73	40.00	0.00	9999.00	-8.96	2.21	90.60	-0.00	0.00	9999.00	2.206
5.80	42.00	0.00	9999.00	-9.52	2.09	94.90	-0.00	0.00	9999.00	2.089
5.86	44.00	0.00	9999.00	-10.07	1.97	98.96	-0.00	0.00	9999.00	1.969
5.91	46.00	0.00	9999.00	-10.61	1.84	102.77	-0.00	0.00	9999.00	1.844
5.95	48.00	0.00	9999.00	-11.13	1.72	106.33	-0.00	0.00	9999.00	1.716
5.99	50.00	0.00	9999.00	-11.64	1.59	109.63	-0.00	0.00	9999.00	1.586
6.02	52.00	0.00	9999.00	-12.14	1.45	112.67	-0.00	0.00	9999.00	1.453
6.04	54.00	0.00	9999.00	-12.62	1.32	115.44	-0.00	0.00	9999.00	1.317
6.05	56.00	0.00	9999.00	-13.08	1.18	117.94	-0.00	0.00	9999.00	1.181
6.06	58.00	0.00	9999.00	-13.53	1.04	120.16	-0.00	0.00	9999.00	1.042
6.06	60.00	0.00	9999.00	-13.97	0.90	122.11	-0.00	0.00	9999.00	0.903
6.05	62.00	0.00	9999.00	-14.38	0.76	123.77	-0.00	0.00	9999.00	0.763
6.03	64.00	0.00	9999.00	-14.78	0.62	125.16	-0.00	0.00	9999.00	0.623
6.01	66.00	0.00	9999.00	-15.16	0.48	126.26	-0.00	0.00	9999.00	0.482
5.98	68.00	0.00	9999.00	-15.53	0.34	127.09	-0.00	0.00	9999.00	0.341
5.94	70.00	0.00	9999.00	-15.87	0.20	127.63	-0.00	0.00	9999.00	0.200
5.90	72.00	0.00	9999.00	-16.19	0.06	127.89	-0.00	0.00	9999.00	0.059
5.85	74.00	0.00	9999.00	-16.50	-0.08	127.86	-0.00	0.00	9999.00	-0.082

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--- TECON - CW - BLPH LOADOUT ON VERVECE ---
Intact Stability Check -- PHASE 15 ---
Righting Arm
Wind Arm
Area Ratio
Arms
Area Ratio * 10^-6
Roll Angle
0
7.5
15
22.5
30
37.5
45
52.5
60
67.5
75

```
**********************************************************
*                                  ***  MOSES    ***                                  *
*                                  -----------------                  1 July, 2025    *
*         --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*         ------   Longitudinal Strength Analysis - Still Water  -- PHASE 15 ------  *
*                                                                                     *
***************************************************************************************************************

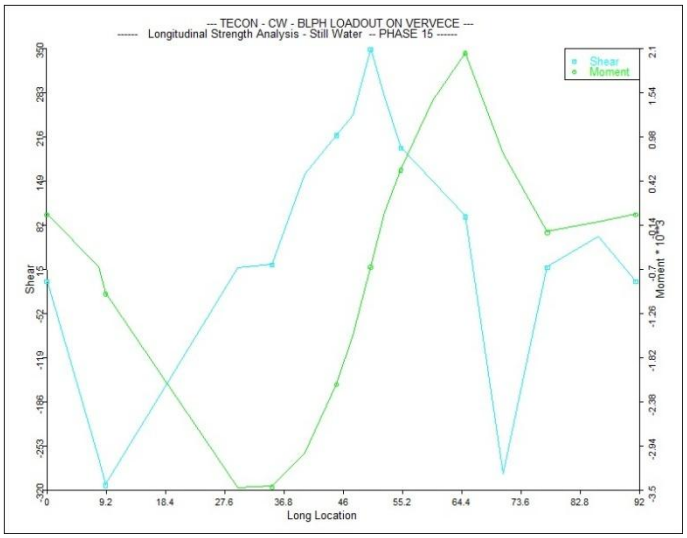
                    +++ L O N G I T U D I N A L   S T R E N G T H   R E S U L T S +++
                    ================================================================

                Process is 15: Units Are Degrees, Meters, and M-Tons Unless Specified

                                    Allowable Stress =     155.00 Mpa

                                  Allowable Deflection =       1.00 MM
```

Longitudinal Location	Shear Force	Bending Moment	B. Stress/ Allowable	Deflection/ Allowable
0.00	-1	0	0.0000	0.0000
8.00	-271	-670	-0.0265	2.5079
9.14	-311	-1003	-0.0397	2.8592
29.72	17	-3476	-0.1374	6.9097
35.00	22	-3454	-0.1365	6.9806
40.00	159	-3029	-0.1197	6.6608
45.00	219	-2155	-0.0852	6.0107
47.50	248	-1538	-0.0608	5.5903
50.29	349	-666	-0.0264	5.0720
52.50	276	22	0.0009	4.6441
55.00	199	567	0.0224	4.1604
60.00	148	1435	0.0567	3.2525
65.00	95	2044	0.0808	2.5003
70.87	-294	767	0.0303	1.8708
77.72	18	-225	-0.0089	1.2761
85.70	64	-100	-0.0040	0.5460
91.44	-1	0	0.0000	0.0001



```
*********************************************************
*                                  ***  MOSES   ***                                  *
*                                  -----------------                 1 July, 2025    *
*        --- TECON - CW - BLPH LOADOUT ON VERVECE ---                                *
*        ---------     Intact Stability Check    -- Buoyancy and Ballast ---------  *
*                                                                                    *
**************************************************************************************************************
```

+++ T N K S B A L L A S T P E R C E N T +++

Event Num	2PW %Full	2SW %Full	3PW %Full	3SW %Full	5PW %Full	5SW %Full
0.00	91.82	94.38	98.00	98.00	52.51	55.27
1.00	87.81	90.69	98.00	98.00	53.35	56.47
2.00	76.17	79.99	98.00	98.00	55.46	59.64
3.00	70.38	74.83	98.00	98.00	56.32	61.17
4.00	53.51	59.81	98.00	98.00	58.34	65.27
5.00	37.60	45.74	98.00	98.00	59.32	68.32
6.00	22.58	32.56	98.00	98.00	59.31	70.40
7.00	8.30	20.10	98.00	98.00	58.37	71.53
8.00	8.30	20.10	74.87	82.69	66.91	75.48
9.00	8.30	20.10	56.13	65.74	70.62	81.24
10.00	8.30	20.10	38.70	50.11	72.88	85.55
11.00	8.30	20.10	27.94	40.55	73.43	87.48
12.00	8.30	20.10	24.02	37.21	70.46	85.17
13.00	8.30	20.10	20.45	34.22	67.12	82.50
14.00	18.32	31.13	20.45	34.22	56.08	70.35
15.00	27.54	40.39	20.45	34.22	45.93	60.16

+++ T N K S B A L L A S T A M O U N T +++

Event Num	2PW Amount	2SW Amount	3PW Amount	3SW Amount	5PW Amount	5SW Amount
0.00	802.16	824.55	856.16	856.16	416.68	438.62
1.00	767.12	792.25	856.16	856.16	423.41	448.14
2.00	665.41	698.81	856.16	856.16	440.15	473.25
3.00	614.89	653.71	856.16	856.16	446.91	485.46
4.00	467.52	522.52	856.16	856.16	463.00	517.98
5.00	328.49	399.62	856.16	856.16	470.76	542.21
6.00	197.28	284.48	856.16	856.16	470.69	558.68
7.00	72.47	175.60	856.16	856.16	463.18	567.68
8.00	72.47	175.60	654.06	722.43	531.01	598.98
9.00	72.47	175.60	490.34	574.36	560.40	644.67
10.00	72.47	175.60	338.06	437.76	578.35	678.90
11.00	72.47	175.60	244.10	354.21	582.76	694.20
12.00	72.47	175.60	209.88	325.11	559.17	675.91
13.00	72.47	175.60	178.62	298.96	532.62	654.67
14.00	160.09	271.97	178.62	298.96	445.01	558.29
15.00	240.63	352.84	178.62	298.96	364.46	477.42

+++ T N K S B A L L A S T S O U N D I N G +++

Event Num	2PW Sounding	2SW Sounding	3PW Sounding	3SW Sounding	5PW Sounding	5SW Sounding
0.00	5.60	5.75	5.97	5.97	3.44	3.60
1.00	5.35	5.53	5.97	5.97	3.49	3.66
2.00	4.64	4.88	5.97	5.97	3.61	3.84
3.00	4.29	4.56	5.97	5.97	3.66	3.93
4.00	3.27	3.65	5.97	5.97	3.77	4.16
5.00	2.30	2.79	5.97	5.97	3.82	4.33
6.00	1.38	1.99	5.97	5.97	3.82	4.44
7.00	0.51	1.23	5.97	5.97	3.77	4.51
8.00	0.51	1.23	4.57	5.04	4.25	4.73
9.00	0.51	1.23	3.42	4.01	4.45	5.05
10.00	0.51	1.23	2.36	3.06	4.58	5.29
11.00	0.51	1.23	1.71	2.48	4.61	5.40
12.00	0.51	1.23	1.47	2.27	4.45	5.27
13.00	0.51	1.23	1.25	2.09	4.26	5.12
14.00	1.12	1.90	1.25	2.09	3.64	4.44
15.00	1.68	2.47	1.25	2.09	3.06	3.87

+++ T N K S B A L L A S T U L L A G E +++

Event Num	2PW Ullage	2SW Ullage	3PW Ullage	3SW Ullage	5PW Ullage	5SW Ullage

0.00	0.50	0.34	0.12	0.12	2.65	2.50
1.00	0.74	0.57	0.12	0.12	2.61	2.43
2.00	1.45	1.22	0.12	0.12	2.49	2.26
3.00	1.80	1.53	0.12	0.12	2.44	2.17
4.00	2.83	2.45	0.12	0.12	2.33	1.94
5.00	3.80	3.30	0.12	0.12	2.27	1.77
6.00	4.71	4.11	0.12	0.12	2.27	1.65
7.00	5.58	4.87	0.12	0.12	2.33	1.59
8.00	5.58	4.87	1.53	1.05	1.85	1.37
9.00	5.58	4.87	2.67	2.09	1.64	1.05
10.00	5.58	4.87	3.73	3.04	1.52	0.81
11.00	5.58	4.87	4.39	3.62	1.48	0.70
12.00	5.58	4.87	4.63	3.82	1.65	0.83
13.00	5.58	4.87	4.84	4.01	1.84	0.98
14.00	4.97	4.19	4.84	4.01	2.45	1.66
15.00	4.41	3.63	4.84	4.01	3.03	2.23

9 BALLASTING SYSTEM CHECKS

9.1 BALLAST TANK CAPACITY

The tanks filling was included in a range from 3% to 98% during all the Load-out and satisfies the requirement of table 4-1, section 4.5.3 of Ref. /2/ for Loadout class 2.

9.2 BALLAST PUMPING CAPACITY

Ballast pumps must be tried (turning on and off the pumps) to ensure perfect functioning of system/item within 24h of the start of load-out.

Pumping capacity of the external pumps consists of 8 pumps, with a rated capacity of min 300 m3/h + 2 x 600 m3/h internal barge pumps.

Load out weight:	2300 t
Cross over estimated duration:	3.5 Hours
Capacity required for the load compensation	660 t/h

Capacity required for tide compensation:

- @max tide speed: 0.16 m/h x (2.52 t/mmx1000mm) = 403 t/h
- Average: 0.80 m x 91.4x27.4 = 2000 t / 6 hours = 334 t/h

a) Normal operation - Load transfer as planned: 130% capacity with intact system and 100% with 1 pump failed.

Capacity with intact system = 2*300 + 2*600 m3/h = 1800 m3/h

Intact system ratio = 1800/(660+403) = 1.70 > 1.3 (OK)

Capacity with 1 pump failed = 2*300 + 1*600 m3/h = 1200 m3/h

Damaged system ratio = 1200/(660+403) = 1.12 > 1.0 (OK)

b) Load transfer stopped: 150% capacity with intact system and 100% capacity with one pump failed.

Capacity with intact system = 4x300 = 1200 m3/h

Intact system ratio = 1200/403 = 3.00 > 1.5 (OK)

Capacity with 1 pump failed = replaced by 1 spare or 1 not used for load transfer being stopped