DRAWING NO. DRAWING_NO. 123A90-DDL-PR-PID-80009 REV. REV 04

GENERAL NOTES

1. ALL VENTS AND DRAINS SHOWN BY THE FOLLOWING SYMBOLS REPRESENT A 3/4" VALVE.

   EXCEPT AS NOTED.

   VENT/DRAIN
   WITH BLIND FLANGE

2. ALL VALVED CONNECTION TO ATMOSPHERE IN PROCESS SERVICE WILL BE PLUGGED OR BLIND FLANGED.
3. HIGH POINT VENTS AND LOW POINT DRAINS USED FOR HYDROTEST PURPOSES ONLY ARE PROVIDED BUT ARE NOT SHOWN ON P&IDs.
4. FOR GENERAL PIPING REQUIREMENTS SEE THE RELEVANT DESIGN SPECIFICATION.
5. DEFINITIONS:

   SLOPE → ELEVATION CHANGES ARE CONSTANTLY DOWNWARD ONLY, NO POCKETS ARE PERMITTED. SPECIFIC SLOPES REQUIRED ARE SHOWN BY SYMBOLS.

   WHERE NO GRADIENT IS SHOWN IT IS ASSUMED THAT THE MINIMUM PREFERED GRADIENT OF 1:100 IS USED.

   I / X

   WHERE X HAS UNITS THE SAME AS I

   GRAVITY DRAINING ELEVATION CHANGES ARE DOWNWARD ONLY. NO POCKETS ARE PERMITTED.

6. INLET LINES TO PRESSURE RELIEF DEVICES EXCEEDING 15 m IN LENGTH OR HAVING MORE THAN TWO ELBOWS, UNLESS OTHERWISE NOTED, MUST BE APPROVED BY PROCESS ENGINEERING.
7. ALL CLOSED PRESSURE RELIEF VALVE DISCHARGE LINES SHALL BE FREE DRAINING FROM THE PRESSURE RELIEF VALVE TO THE TOP OF THE DISCHARGE HEADER. EACH LINE IS TO BE CHECKED FOR A DOWNWARD SLOPE AFTER CONSTRUCTION.
8. ALL PRESSURE RELIEF VALVES DISCHARGING TO ATMOSPHERE AT SAFE LOCATION SHALL CONFORM TO THE RELEVANT DESIGN SPECIFICATION.
9. FOR UNSPARED PRESSURE RELIEVING DEVICES, WHEN AN INLET BLOCK VALVE IS PROVIDED BETWEEN A VESSEL AND ITS PRESSURE RELIEVING DEVICE OR WHEN A DISCHARGE BLOCK VALVE IS PROVIDED BETWEEN A PRESSURE RELIEVING DEVICE AND A COMMON DISCHARGE HEADER, THE BLOCK VALVE SHALL BE ARRANGED SO THAT IT CAN BE LOCKED OR SEALED OPEN. UNDER NO CONDITION SHALL A DISCHARGE BLOCK VALVE BE CLOSED, WHILE THE VESSEL IS IN OPERATION, BEFORE THE INLET BLOCK VALVE IS CLOSED. THE OWNER ASSUMES RESPONSIBILITY FOR ADMINISTRATIVE CONTROL OF THESE VALVES IN STRICT ACCORDANCE WITH ASME SECTION VIII, APPENDIX M.
10. SPACE AND ACCESS IS REQUIRED FOR ON-LINE SET-POINT VERIFICATION (OLSPV) OF ALL PSV's.
11. WHEN PIPE STRAINERS ARE INDICATED, THE STRAINER BODY, SCREEN AND SIZE OF OPENINGS ARE AS SPECIFIED BY THE RELEVANT SPECIFICATION.
12. FOR PRESSURE RELIEF VALVE AND RUPTURE DISC DISCHARGING TO ATMOSPHERE 6 MM WEEP HOLES ARE PROVIDED AT LOW POINTS OF THE DISCHARGE LINES
13. REDUCERS IN PRESSURE RELIEF VALVE INLET OR OUTLET PIPING SHALL BE MINIMUM DISTANCE FROM THE PRESSURE RELIEF VALVES.
14. DOCUMENTED ADMINSTRATIVE PROCEDURES SHALL ENSURE THAT WHENEVER SELECTED EQUIPMENT ITEMS (FOR EXAMPLE, EXCHANGERS OR FILTERS) ARE ISOLATED FOR MAINTENANCE, THEY SHALL BE VENTED AND DRAINED IMMEDIATELY.
15. ACCORDING TO TQ-00069. DCS START-STOP FUNCTIONS ARE SHOWN AS REQUIRED.
16. TSO FOR A CONTROL VALVE WILL RESULT IN CLASS V MINIMUM SHUT OFF. ON-OFF VALVES WILL MEET API598.
17. OWNER AND ROSETTI MARINO CONTRACTOR SHALL DESIGN THE SAFETY INSTRUMENTED SYSTEM (SIS) IN ACCORDANCE WITH APPLICABLE PROCESS INDUSTRY STANDARDS, SUCH AS ISA S84, IEC 61511 AND IEC 61508. OWNER AND ROSETTI MARINO CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING THE SAFETY INSTRUMENTED FUNCTIONS (SIF) AND PERFORMING SAFETY INTEGRITY LEVEL (SIL) DETERMINATION TO ALL SAFETY INSTRUMENTED FUNCTIONS IN ACCORDANCE WITH OWNER'S RISK MANAGEMENT POLICY.
18. DELETED.
19. THE OWNER IS RESPONSIBLE FOR ESTABLISHING ADMINISTRATIVE CONTROLS AND PROCEDURES OF USE OF ANY SHUTDOWN SYSTEM BYPASS FEATURES FOR TESTING OR MAINTENANCE OF THE SYSTEM. ANY PROCESS INTERLOCK OF SAFETY INTEGRITY LEVEL SIL-3 SHALL NOT BE BYPASSED UNDER ANY CIRCUMSTANCES.
20. ALL THERMOWELL CONNECTIONS ARE FLANGED CONNECTIONS UNLESS OTHERWISE NOTED.
21. DELETED.

LINE SERVICE

AV	ATMOSPHERIC VENT
CB	CONCENTRATED BRINE
CI	CHEMICAL INJECTION
DI	DEIONISED WATER
DM	DEMINERALIZED WATER
HY	HYDROGEN
IA	INSTRUMENT AIR
N	NITROGEN GAS
SWR	SEA WATER RETURN
SWS	SEA WATER SUPPLY
VL	LP VENT
WW	WASTE WATER

ABBREVIATIONS

ATM.	ATMOSPHERE
BDV	BLOWDOWN VALVE
BRS	BIRDSCREEN
CCS	CENTRAL CONTROL SERVICE
DIFF.	DIFFERENTIAL
DWG	DRAWING
ESD	EMERGENCY SHUTDOWN
FB	FULL BORE
FC	FAIL CLOSED ON LOSS OF MOTIVE POWER OR SIGNAL
FO	FAIL OPEN ON LOSS OF MOTIVE POWER OR SIGNAL
FGS	FIRE & GAS SYSTEM
GVC	GOOSENECK VENT
HH	HIGH HIGH ALARM TRIP
H	HIGH ALARM
ID	INSIDE DIAMETER
IA	INSTRUMENT AIR
L	LOW ALARM
LIP	LOCKED IN PLACE
LL	LOW LOW ALARM AND TRIP
LO	LOCKED OPEN
LP	LOW PRESSURE
M	ELECTRIC MOTOR
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NNF	NORMALLY NO FLOW
NO	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
PSV	PRESSURE SAFETY VALVE
P/T	PRESSURE/TEMPERATUE
RO	RESTRICTION ORIFICE
RS	REMOVABLE SPOOL
SAM	SAMPLE CONNECTION
SP	SPECIALITY PIPING ITEM
SPB	SPECTACLE BLIND
STR	STRAINER
TSO	TIGHT SHUT-OFF
T/T	TANGENT TO TANGENT
VB	VORTEX BREAKER

EQUIPMENT

PUMPS

CENTRIFUGAL PUMP

LIFT INLINE

STORAGE TANK

TANK

VESSEL

HORIZONTAL VESSEL

MISCELLANEOUS

M
MOTOR

MOTOR

PACKAGE ITEM

OTHERS

CAISSON

CAISSON

VENT STACK

NOTES

1. FOR PIPING AND INSTRUMENTATION SYMBOLOGY, SEE DRAWINGS: 123A90-DDL-PR-PID-80010 AND 123A90-DDL-PR-PID-80042, RESPECTIVELY.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	21/10/2025	RZI	RZI	CGI	AS BUILT
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
GENERAL NOTES

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80009	SHEET 001	REV. 04

File Name : DRAWING_NO.