Base Load Power Hub (BLPH)

ELECTRICAL HEAT TRACING

EHT ISOMETRICS

Document Number: 1724001647-EL-DD-00004

Document Class: 2

03	17-02-25	Accepted for Construction (AFC)	A. Dumitru	A. Martelli	G. Pupilli
02	20-01-25	Issue for Review (IFR)	A. Dumitru	A. Martelli	G. Pupilli
01	29-10-24	Issue for Review (IFR)	A. Dumitru	A. Martelli	G. Pupilli
00	23-09-24	Issue for Review (IFR)	A. Dumitru	A. Martelli	G. Pupilli
Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
00	ISSUE FOR REVIEW (IFR)
01	ISSUE FOR REVIEW (IFR)
02	ISSUE FOR REVIEW (IFR)
03	ACCEPTED FOR CONSTRUCTION (AFC)

HOLDS LIST

No.	Description
1.	
2.	
3.	
4.	

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CAD FILENAME: PIT240024_DD01_1001_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1001-A	PIPING	3BTV2-CT	17.6	22.0	1.8	271	230	3.9	10.7	85
		TOTALS	17.6	22.0	1.8	271				

HEATER ADDER TABLE

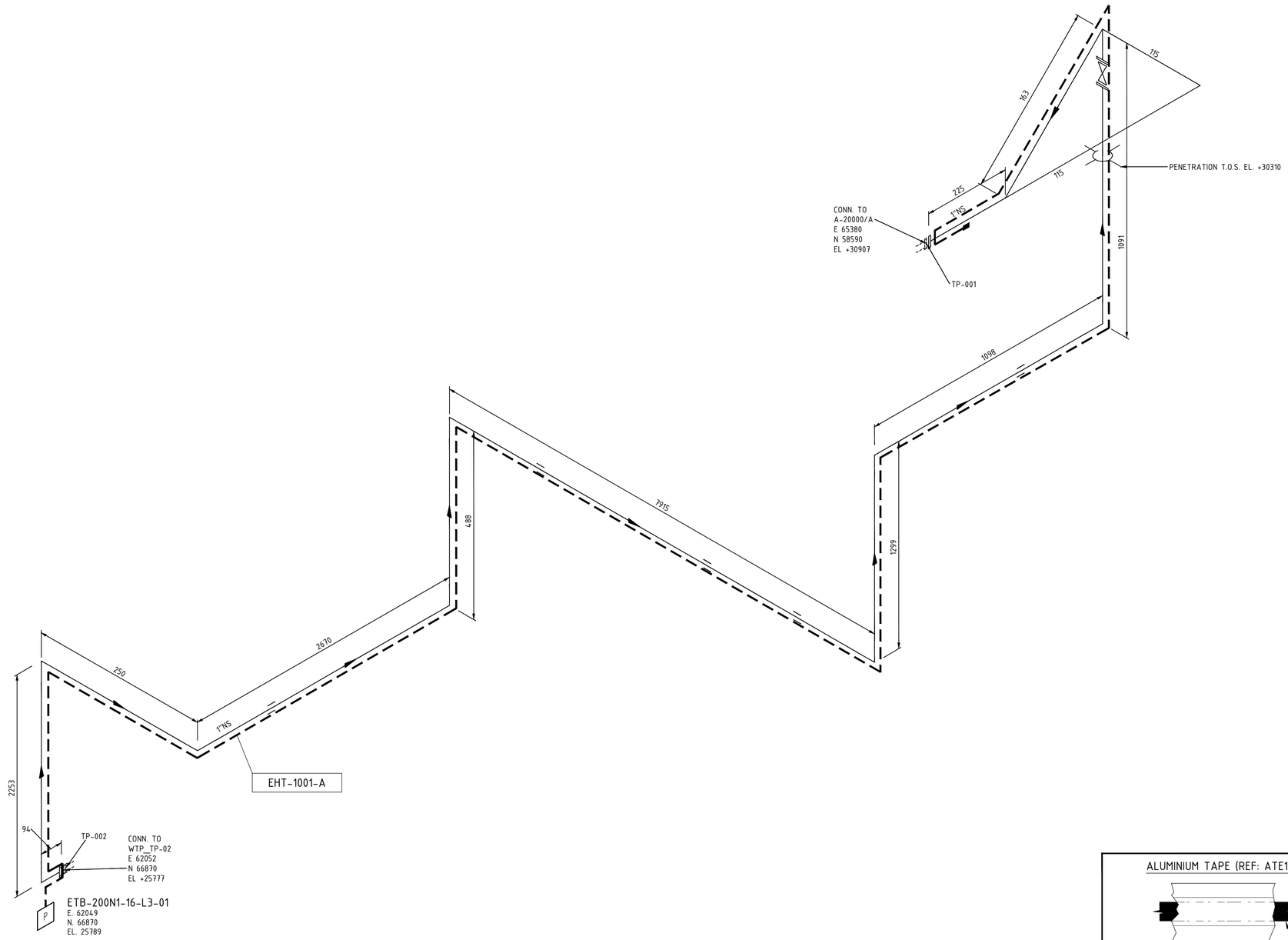
PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Flange (fixed adder)	2	0.46	0.92
1	Typical Metal Valve	1	0.82	0.82
1	Typical Pipe Support	5	0.15	0.75

DESIGN PARAMETERS

CIRCUIT NUMBER	1001	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	22°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	22°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	22	m	Raychem Self-Regulating Heating Cable
JBS-100-E	1	each	Single entry power connection, EP, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4" to 3" (40-90mm)
GS-54	0.9	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	7	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)
JBS-SPA	0.2	bag	Small Pipe Adapter for E-100, JBS-100, and JS-100



LINE NUMBERS

1"-DM-001-01SS-E

REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000_001

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

ALUMINIUM TAPE (REF: ATE180)

SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CROSSWIND

ROSETTI MARINO

nVent RAYCHEM TRACER

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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.:

DOC CODE:

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	3/10	03

CAD FILENAME: PIT240024_DD01_1002_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1002-A	PIPING	3BTV2-CT	18.0	36.5	3.1	459	230	3.9	10.7	85
		TOTALS	18.0	36.5	3.1	458				

HEATER ADDER TABLE

PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
0.5	Typical Metal Valve	1	1.44	1.44
0.75	Typical Metal Valve	1	1.54	1.54
1	Typical Pipe Support	4	0.15	0.6
1	Typical Flange (fixed adder)	3	0.46	1.38
1	Typical Metal Valve	2	1.64	3.28
N/A	DRAIN	2	0.3	0.6

DESIGN PARAMETERS

CIRCUIT NUMBER	1002	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	25°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	25°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	50°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

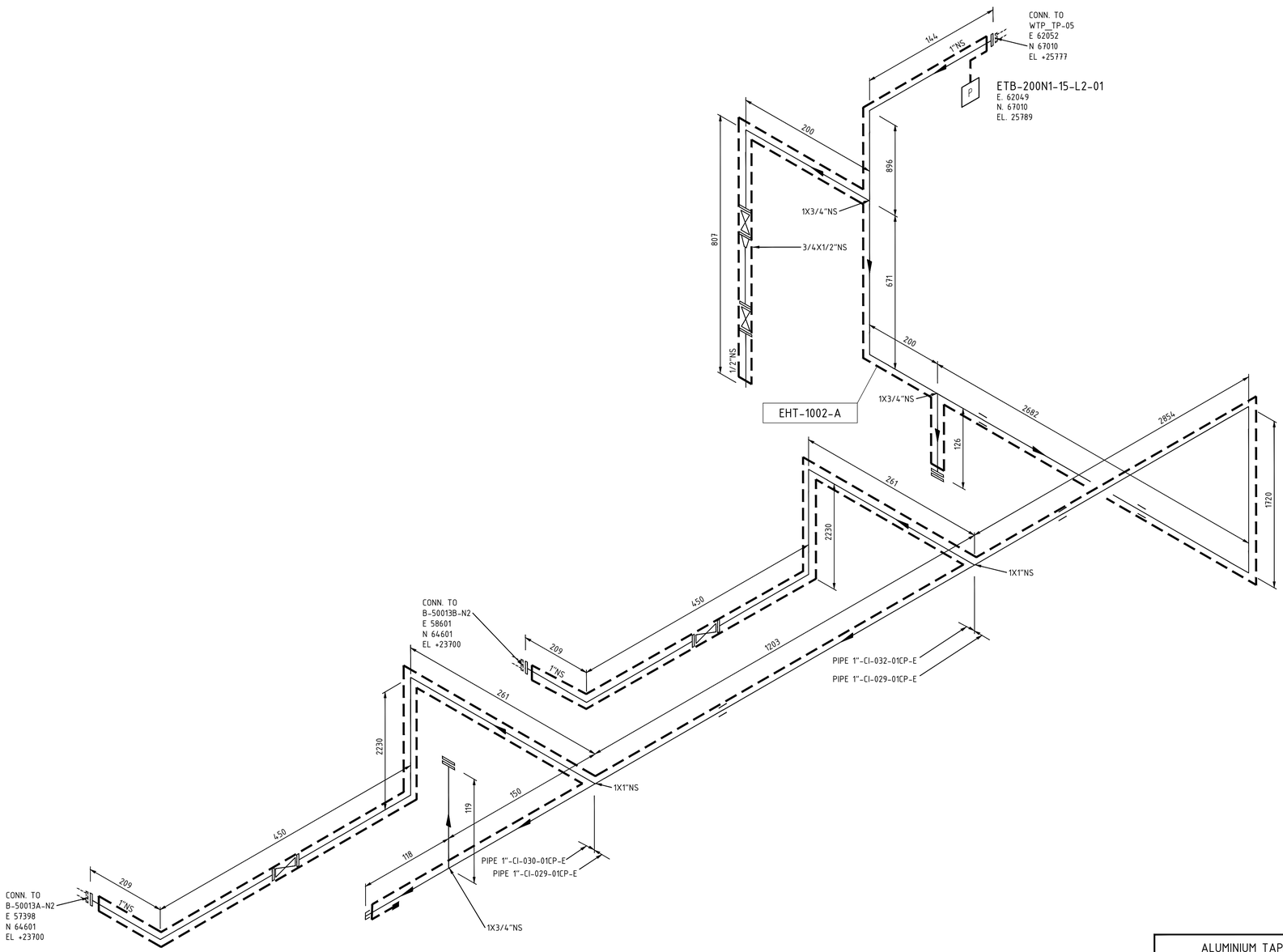
CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	36.5	m	Raychem Self-Regulating Heating Cable
JBS-100-E	1	each	Integrated Junction Box, Multiple-Entry, Cold-Applied, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4" to 3" (40-90mm)
GS-54	1.5	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	7	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)
JBS-SPA	0.2	bag	Small Pipe Adapter for E-100, JBS-100, and JS-100

LINE NUMBERS

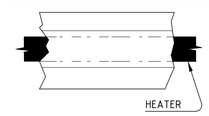
1"-CI-029-01CP-E
1"-CI-030-01CP-E
1"-CI-032-01CP-E

REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000_021
123A90-DDL-PP-DI-71000_022
123A90-DDL-PP-DI-71000_024



ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

CROSSWIND

ROSETTI MARINO

nVent RAYCHEM TRACER

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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.

DOC CODE

PROJECT TITLE
HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE
ELECTRICAL HEAT TRACING
ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	4/10	03

CAD FILENAME: PIT240024_DD01_1003_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1003-A	PIPING	3BTV2-CT	26.1	78.5	6.7	1002	230	10.2	10.7	85
		TOTALS	26.1	78.5	6.7	1001				

HEATER ADDER TABLE

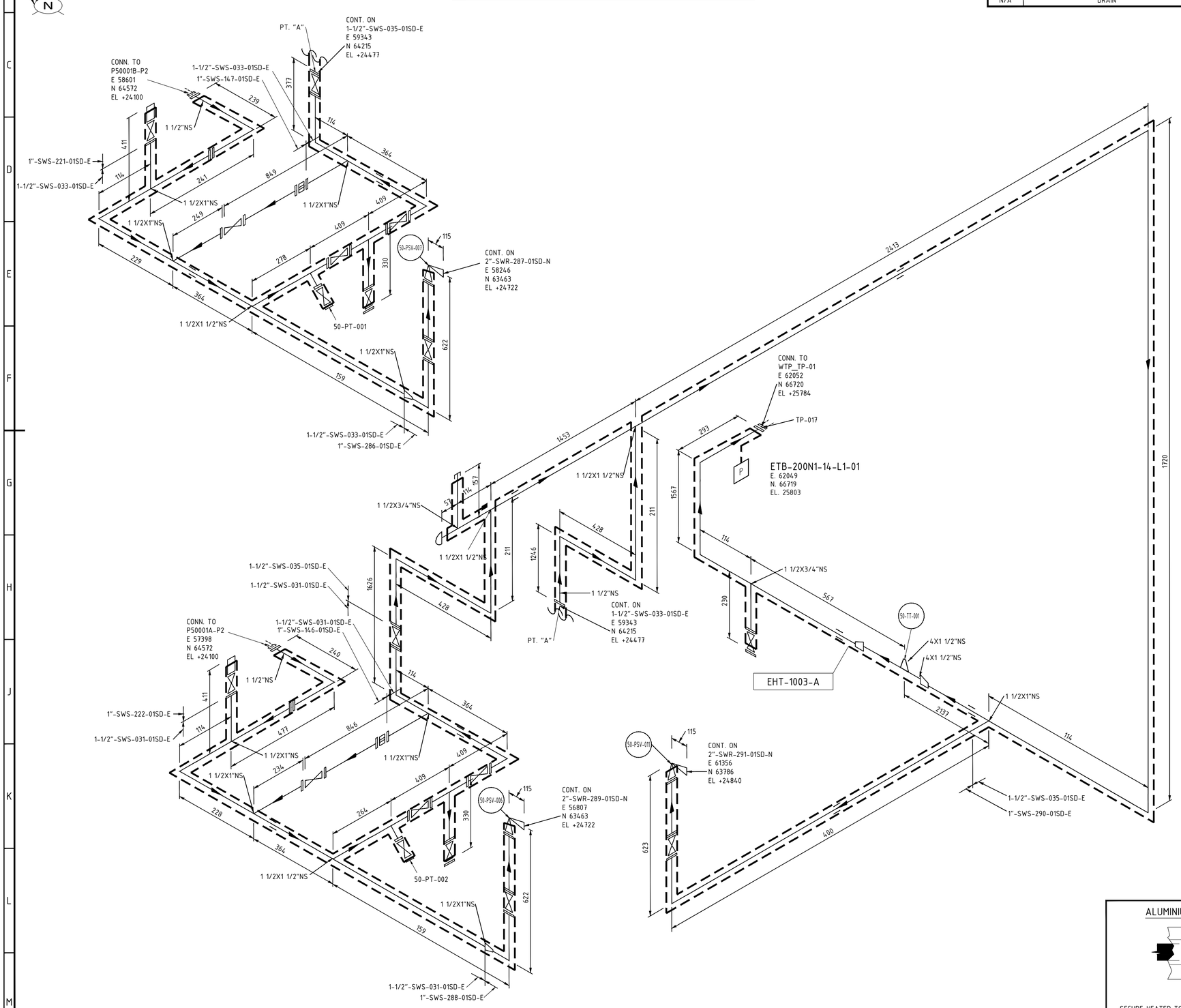
PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Flange (fixed adder)	2	0.46	0.92
1	Typical Pipe Support	1	0.31	0.31
1	Typical Metal Valve	8	1.64	13.12
1.5	Typical Pipe Support	8	0.18	1.44
1.5	Typical Flange (fixed adder)	5	0.46	2.3
1.5	Typical Metal Valve	6	1.77	10.62
N/A	VENT	3	0.7	2.1
N/A	DRAIN	5	0.7	3.4

DESIGN PARAMETERS

CIRCUIT NUMBER	1003	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	25°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	25°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	78.5	m	Raychem Self-Regulating Heating Cable
JBS-100-E	1	each	Integrated Junction Box, Multiple-Entry, Cold-Applied, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4" to 3" (40-90mm)
GS-54	4.4	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	11	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)



LINE NUMBERS

1"-SWS-146-01SD-E
1"-SWS-147-01SD-E
1"-SWS-221-01SD-E
1"-SWS-222-01SD-E
1"-SWS-286-01SD-E
1"-SWS-288-01SD-E
1"-SWS-290-01SD-E
1-1/2"-SWS-031-01SD-E
1-1/2"-SWS-033-01SD-E
1-1/2"-SWS-035-01SD-E

REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000_023
123A90-DDL-PP-DI-71000_025
123A90-DDL-PP-DI-71000_026
123A90-DDL-PP-DI-71000_059
123A90-DDL-PP-DI-71000_060
123A90-DDL-PP-DI-71000_117
123A90-DDL-PP-DI-71000_118
123A90-DDL-PP-DI-71000_150
123A90-DDL-PP-DI-71000_152
123A90-DDL-PP-DI-71000_154

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

CROSSWIND

ROSETTI MARINO

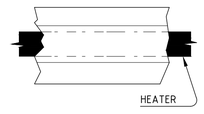
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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CLIENT PROJECT NO.:

DOC CODE:

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE: N/A

DRAWING NO.: 1724001647-EL-DD-00004

SHEET NO.: 5/10

REVISION: 03

A1

CAD FILENAME: PIT240024_DD01_1004_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1004-A	PIPING	3BTV2-CT	0.9	3.2	0.2	28	230	3.9	10.7	85
		TOTALS	0.9	3.2	0.2	28				

HEATER ADDER TABLE

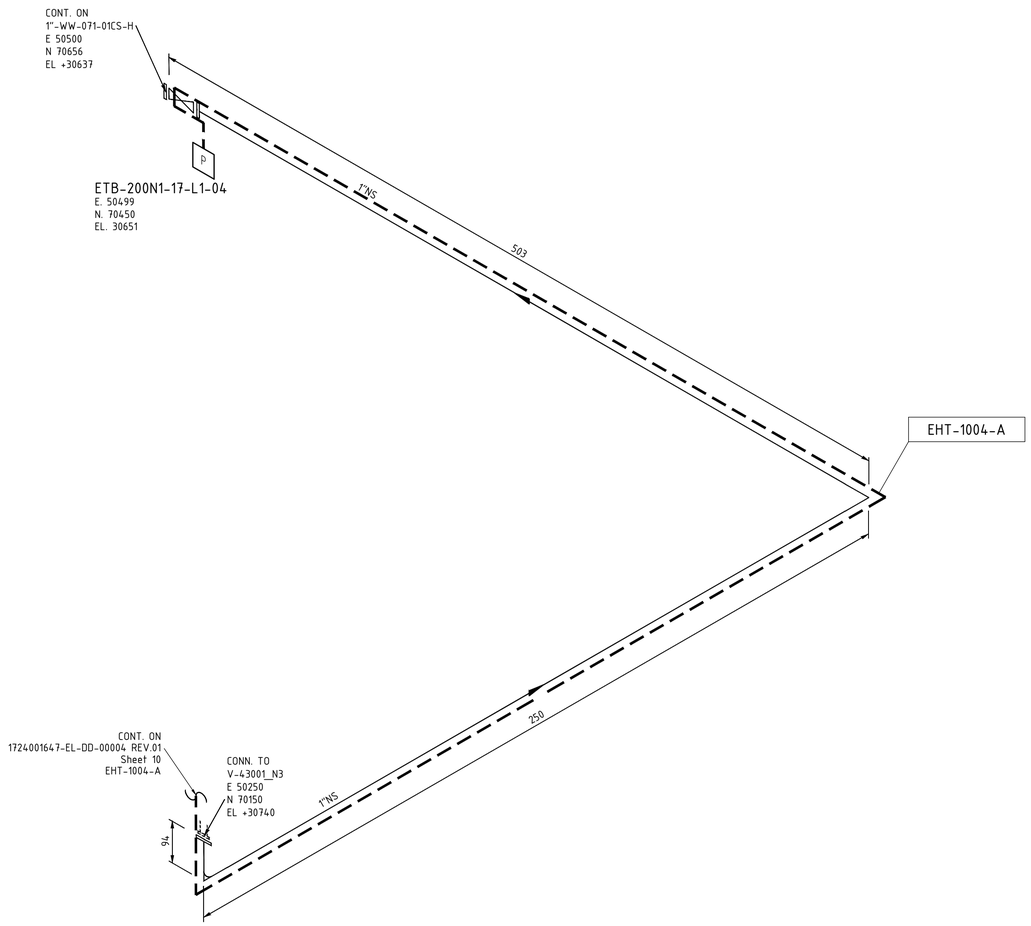
PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Metal Valve	1	0.82	0.82
1	Typical Flange (fixed adder)	1	0.46	0.46

DESIGN PARAMETERS

CIRCUIT NUMBER	1004	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	11°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	11°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	3.2	m	Raychem Self-Regulating Heating Cable
JBM-100-E	1	each	Integrated Junction Box, Multiple-Entry, Cold-Applied, ATEX
PSE-090	2	each	Pipe Strap for 1.1/4' to 3' (40-90mm)
GS-54	0.1	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	1	each	Warning Label - English
JBM-SPA	0.2	bag	Small Pipe Adapter for JBM-100-E



LINE NUMBERS

1"-WW-259-01CS-E

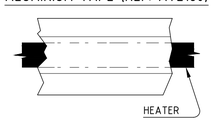
REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000_123

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CROSSWIND

ROSETTI MARINO

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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.

DOC CODE

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	6/10	03

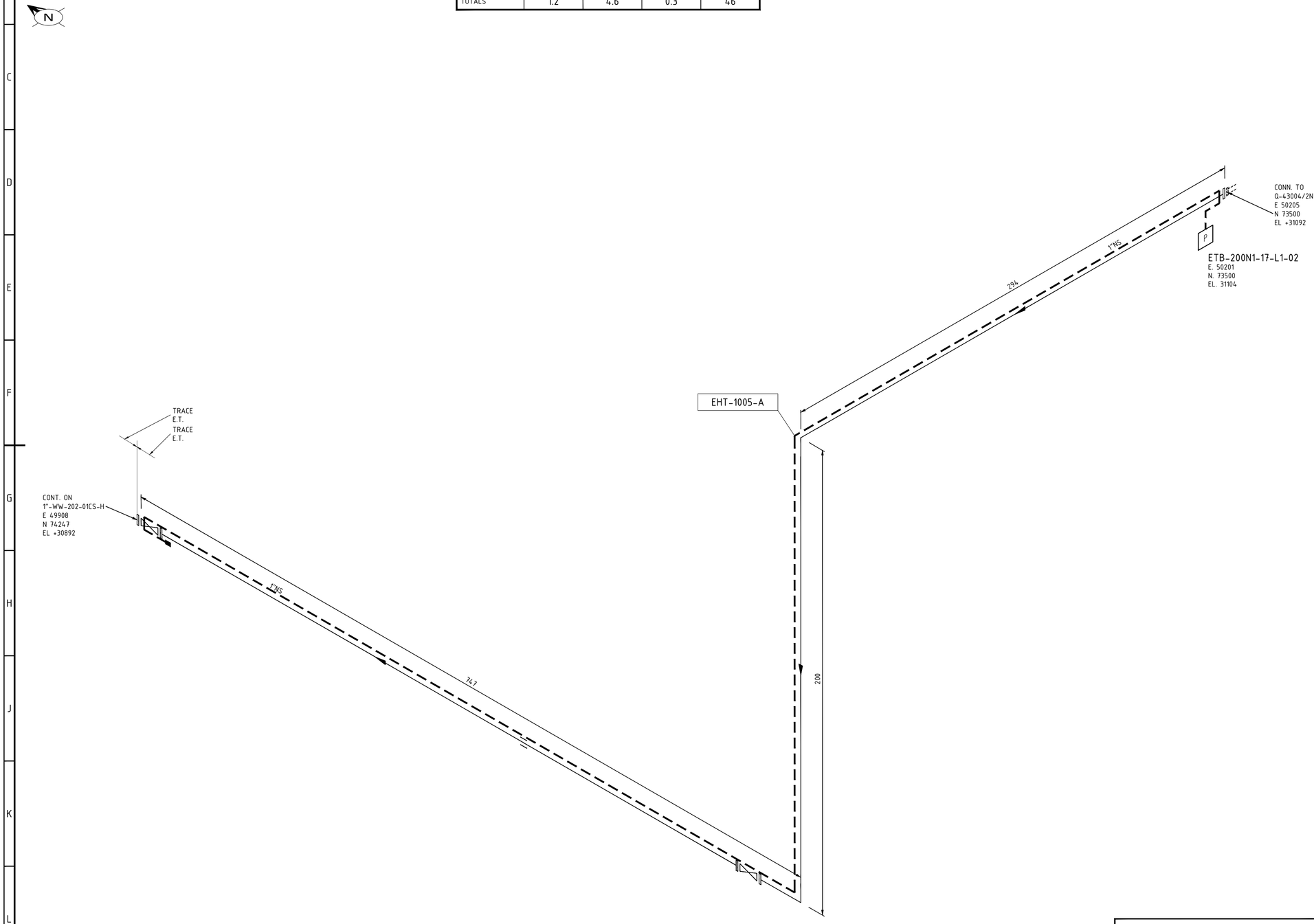
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HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1005-A	PIPING	3BTV2-CT	1.2	4.6	0.3	46	230	3.9	10.7	85
		TOTALS	1.2	4.6	0.3	46				

HEATER ADDER TABLE

PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Flange (fixed adder)	1	0.46	0.46
1	Typical Metal Valve	2	0.82	1.64
1	Typical Pipe Support	1	0.15	0.15



DESIGN PARAMETERS

CIRCUIT NUMBER	1005	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	11°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	11°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	4.6	m	Raychem Self-Regulating Heating Cable
JBM-100-E	1	each	Integrated Junction Box, Multiple-Entry, Cold-Applied, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4" to 3" (40-90mm)
GS-54	0.2	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	1	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)
JBM-SPA	0.2	bag	Small Pipe Adapter for JBM-100-E

LINE NUMBERS

1"-WW-260-01CS-E

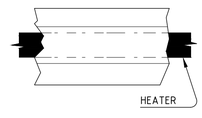
REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000__124

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CROSSWIND

ROSETTI MARINO

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nVent.com

NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.:

DOC CODE:

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	7/10	03

A1

CAD FILENAME: PIT240024_DD01_1006_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1006-A	PIPING	3BTV2-CT	1.0	2.5	0.1	19	230	3.9	10.7	85
		TOTALS	1.0	2.5	0.1	19				

HEATER ADDER TABLE

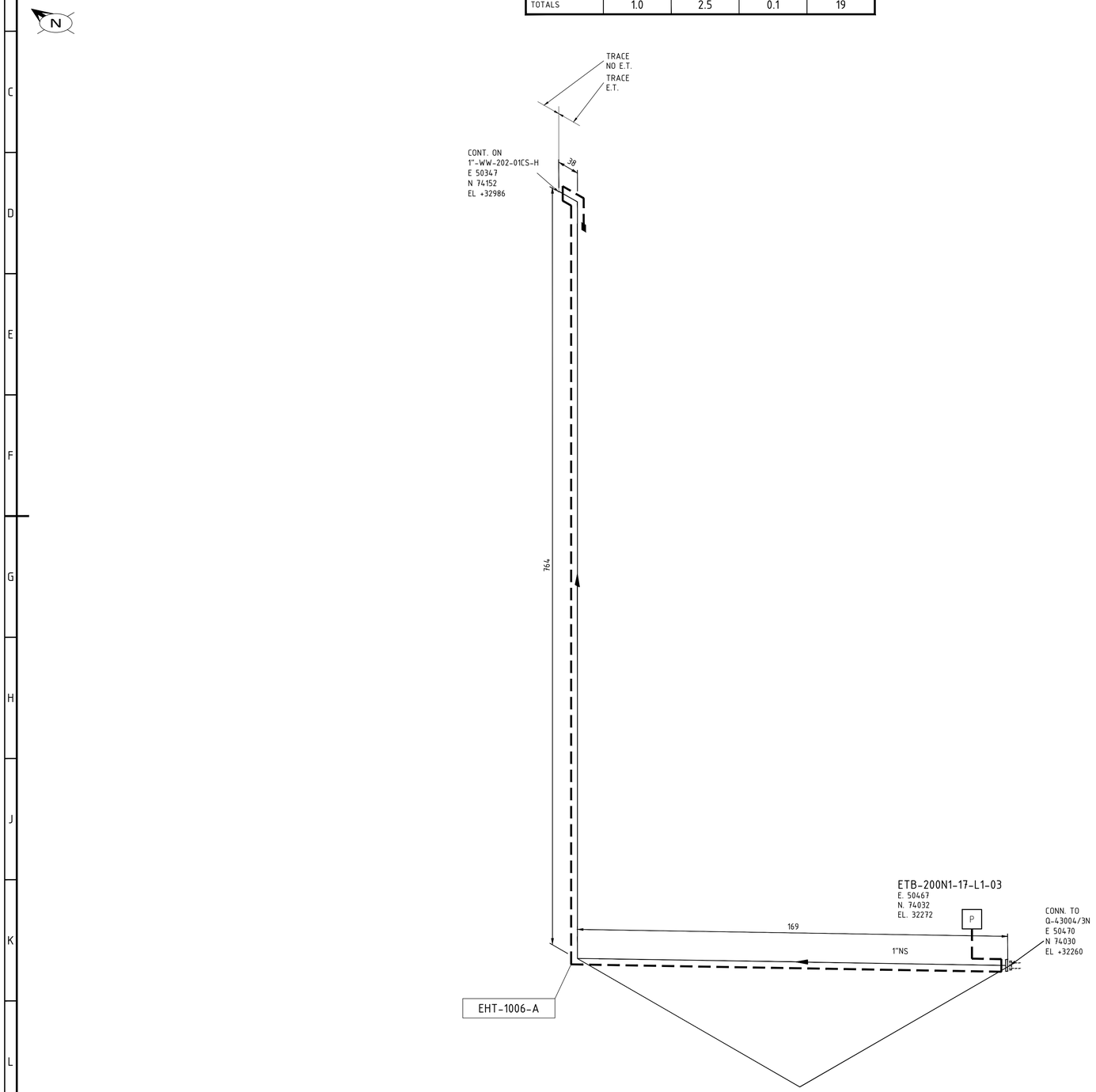
PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Flange (fixed adder)	1	0.46	0.46

DESIGN PARAMETERS

CIRCUIT NUMBER	1006	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	25°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	25°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	2.5	m	Raychem Self-Regulating Heating Cable
JBS-100-E	1	each	Single entry power connection, EP, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4' to 3' (40-90mm)
GS-54	0.1	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	1	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)
JBS-SPA	0.2	bag	Small Pipe Adapter for E-100, JBS-100, and JS-100

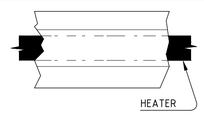


LINE NUMBERS	REFERENCE DRAWINGS / DOCUMENTS
1"-WW-202-01CS-H	123A90-DDL-PP-DI-71000_100

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CROSSWIND

ROSETTI MARINO

nVent RAYCHEM TRACER

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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.

DOC CODE

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	8/10	03

A1

CAD FILENAME: PIT240024_DD01_1007_001_03.dwg

HEAT TRACING DATA

HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	PIPE LENGTH (m)	HEATER LENGTH (m)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W/m)	POWER OUTPUT (W/m)	SHEATH TEMP. (°C)
EHT-1007-A	PIPING	3BTV2-CT	15.0	19.5	1.6	239	230	3.9	10.7	85
		TOTALS	15.0	19.5	1.6	239				

HEATER ADDER TABLE

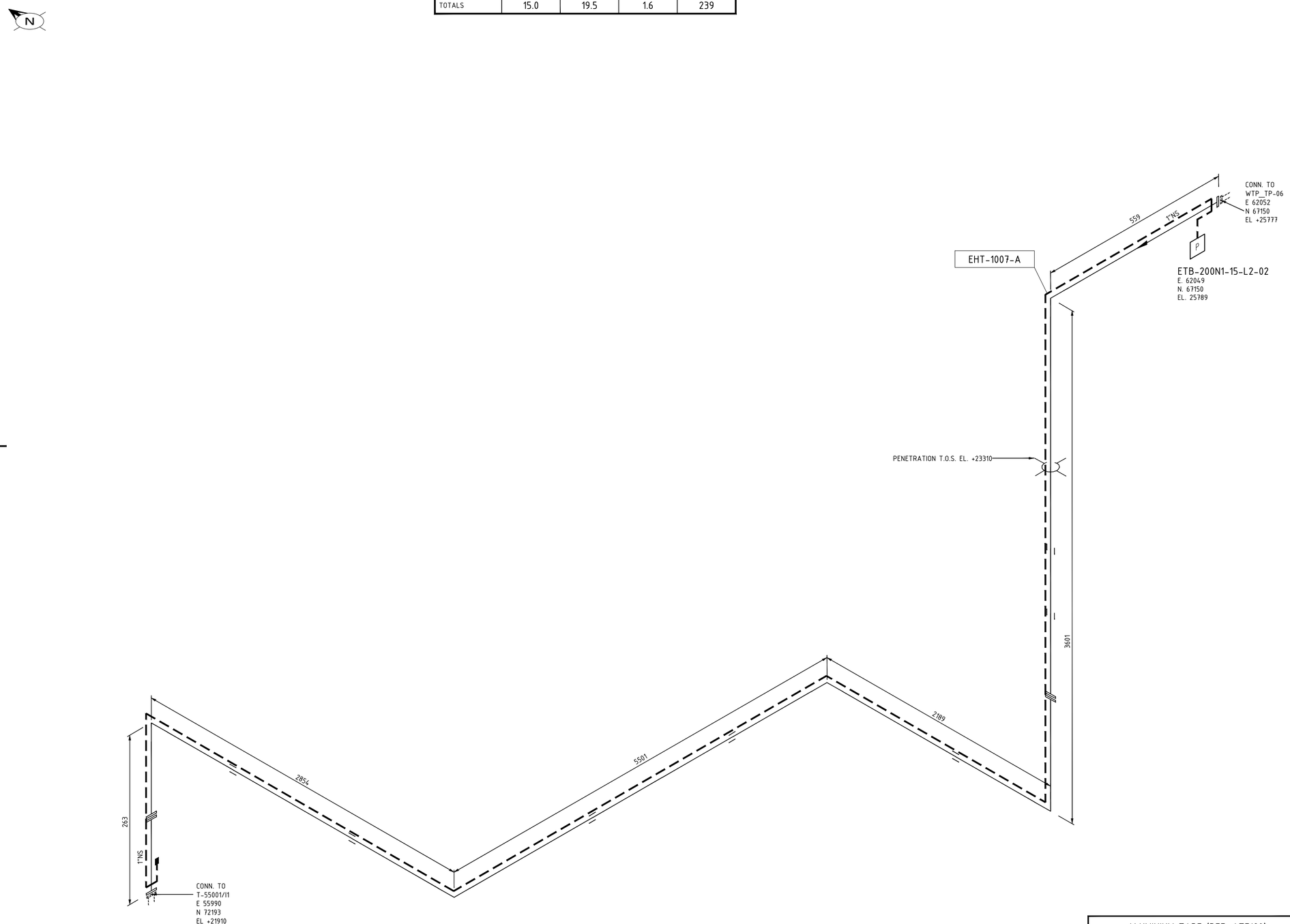
PIPE SIZE (Ins)	TYPE	QTY	ALLOWANCE PER ITEM (m)	TOTAL ALLOWANCE (m)
1	Typical Pipe Support	7	0.15	1.05
1	Typical Flange (fixed adder)	4	0.46	1.84

DESIGN PARAMETERS

CIRCUIT NUMBER	1007	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	25°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	25°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	50°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	19.5	m	Raychem Self-Regulating Heating Cable
JBS-100-E	1	each	Single entry power connection, EP, ATEX
PSE-090	1	each	Pipe Strap for 1.1/4' to 3' (40-90mm)
GS-54	0.8	each	Glass Tape (16m/roll), suited for SS pipes
LAB-I-01	6	each	Warning Label - English
E-20	1	each	Heat shrink end seal, ATEX (BTV, QTVR)
JBS-SPA	0.2	bag	Small Pipe Adapter for E-100, JBS-100, and JS-100



LINE NUMBERS

1"-CI-043-01CP-E

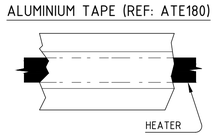
REFERENCE DRAWINGS / DOCUMENTS

123A90-DDL-PP-DI-71000_028

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THE PRECISE LOCATION OF EACH TRACE HEATING COMPONENT TO BE DETERMINED AT SITE.
3. ELEXANT 5010i WILL BE INSTALLED ON RACKS.
4. HEATING CABLE ALLOWANCES PROVIDED IN THE 'EHT ADDER TABLE' FOR FLANGES AND VALVES ARE IN ADDITION TO THEIR LINEAR LENGTHS.

ALUMINIUM TAPE (REF: ATE180)



SECURE HEATER TO PIPE / VESSEL / EQUIPMENT BODY BY APPLYING ALUMINIUM TAPE ALONG THE FULL LENGTH OF HEATER

CROSSWIND

ROSETTI MARINO

nVent RAYCHEM TRACER

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NVENT PROJECT NO.: PIT240024

REV.	DATE	DESCRIPTION	BY	CHK	APP
03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
02	20/01/2025	ISSUED FOR REVIEW	ADU	AMI	GPI
00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.

DOC CODE

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING ISOMETRIC

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	9/10	03

A1

CAD FILENAME: PIT240024_DD02_3001_001_03.dwg

HEAT TRACING DATA

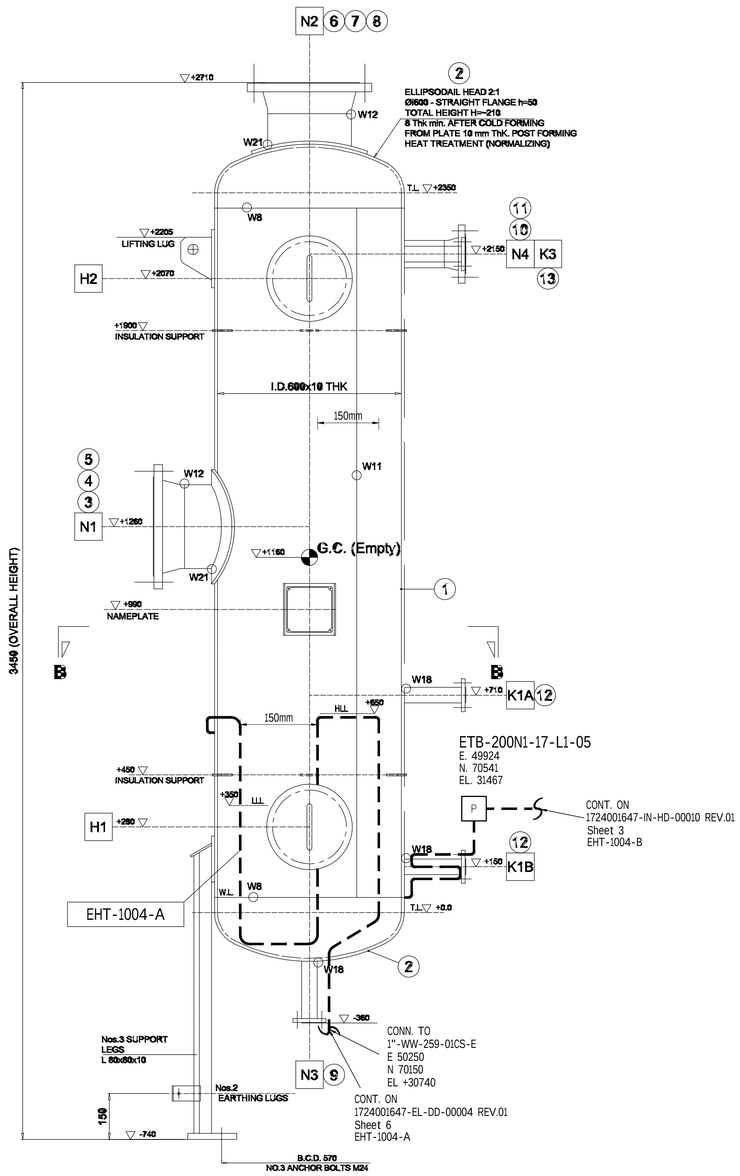
HEATER REFERENCE	DESIGN AREA	HEATER CAT. NUMBER	HEATER LENGTH (m)	HEATED AREA (m^2)	HEATER SPACING (mm)	CIRCUIT BREAKER CURRENT (A)	OPERATING LOAD (W)	HEATER VOLTAGE (V)	HEAT LOSS (W)	POWER OUTPUT (W/m)	SHEATH TEMPERATURE (°C)
EHT-3001-A	EQUIPMENT	3BTV2-CT	1x17.3	2.43	150	1.8	274	230	198	13.9	
					TOTALS	1.8	274				

DESIGN PARAMETERS

CIRCUIT NUMBER	3001	AREA CLASSIFICATION	HAZARDOUS/ZN.1
		T-RATING	T3
MAINTAIN TEMP.	5°C		
OPERATING TEMP.	11°C	INSULATION TYPE	RW/MF 1:2015
MAX. EXPOSURE TEMP.	11°C	INSULATION THICKNESS	20mm
MAX. ALLOWABLE TEMP.	100°C		
MAX. AMBIENT TEMP.	40°C		
MIN. AMBIENT TEMP.	-9°C		

COMPONENT BILL OF MATERIALS

CAT. NUMBER	QTY	UNIT	PRODUCT DESCRIPTION
3BTV2-CT	17.3	m	Raychem Self-Regulating Heating Cable
PSE-090	2	each	Pipe Strap for 1.1/4" to 3" (40-90mm)
JBM-100-E	1	each	Integrated Junction Box, Multiple-Entry, Cold-Applied, ATEX
ATE-180	0.32	roll	Fixing tape (aluminium, 55m/roll)
LAB-I-01	1	each	Warning Label - English

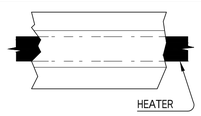


EQUIPMENT NUMBERS	REFERENCE DRAWINGS / DOCUMENTS
V-43001	

GENERAL NOTES

1. TRACE HEATING PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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NVENT PROJECT NO.: PIT240024

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03	12/02/2025	ACCEPTED FOR CONSTRUCTION	ADU	AMI	GPI
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00	23/09/2024	ISSUED FOR REVIEW	ADU	AMI	GPI

CLIENT PROJECT NO.

DOC CODE

PROJECT TITLE: HOLLANDSE KUST NOORD WIND PARK Project
ELECTRICAL HEAT TRACING SYSTEM

DESIGNER: A. Dumitru

LEAD ENG.: A. Martelli

DRAWING TITLE: ELECTRICAL HEAT TRACING EQUIPMENT

SCALE	DRAWING NO.	SHEET NO.	REVISION
N/A	1724001647-EL-DD-00004	10/10	03