

Single Line Details

Project Name: Trace Team
Project No: 1
Customer: BP
Customer Reference:

File Name: \\hca-isi01.no.enterdir.com\home02_c01_r01\248348\personal\Tyco Thermal Controls\TraceCalc Pro2\Projects\Trace Te

This Line ID: 0200-WD-47L98047-AS20-4C [001]
Immediate Parent: None

Type: Parent
Top Level Parent: None

Status: OK

INPUT PARAMETERS

Reference

Area Name:
Drawing No: PH-VID-E-2007-010
Fluid: WATER

Last Change: 13.10.2014

Pipe

Length: 50,00 m
Size: 2,000 in
Type: CS-S40
Description: Carbon Steel Pipe - Schedule 40

Area Class

Standards Body: CENELEC
Area Classification: Zone 1
T-Rating: T3
Auto-Ignition Temp: N/A °C
Allow Stabilized Design: Yes
Use Controlled Design: No
Setpoint Temp: N/A °C

Temperatures

Maintain: 5 °C
Min. Ambient: -10 °C
Max. Ambient: 25 °C
Max. Exposure: 65 °C
Max Operating: 65 °C
Max Allowable: 85 °C

Insulation

Inner Type: CG (TYPICAL)
Inner Description: Cellular Glass (typical)
Inner Thickness: 30,0 mm
Outer Type:
Outer Description:
Outer Thickness:
Oversized: No
Oversize Diameter:

Electrical

Configuration: Single phase (L-N)
Heater Voltage: 230 V
Max. CB Size: 16 A
CB Load Factor: 100 %

Location

Outdoors: Yes
WindSpeed: 8,9 m/s
Chemical Exposure: Organics
Startup Temp: -10 °C
HL Safety Factor: 20 %

Heater Technology

Technology: Parallel Heating Cables
Conductors: N/A

Forced Heater Selection

Family:
Heater:
Cold Lead:
Cold Lead Length:
Dielectric:
Jacket Material:
Ground Path:
Attachment: ATE-180

Control

Control Method: Uncontrolled
Circuit No: F311
CB No: 60-EL-9006-F311
Use Central: No
Use Local: No
Local Type:

Design Options

Allow Spiraling: No
Forced Trace Ratio:
Multiple Cable Sets: No

Forced Centralized Control Selection

Panel Name:
Sensor:
Sensor Qty: 0

Forced Local Control Selection

Controller Name:
Controller Qty: 0
Sensor Name:
Sensor Qty: 0

Heat Sinks

	Type	Mode	Specify Spacing	Spacing	Quantity
Valve 1	01TYPV1	Calculate heat loss			1
Valve 2					0
Valve 3					0
Support 1	01TYPS1	Calculate heat loss	Yes	3,1	17
Support 2			Yes	0,0	0
Support 3			Yes	0,0	0
Flange			Yes	0,0	0
Drain/Vent					0
Misc.					0,0

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CALCULATED RESULTS

Heat Losses and Heater Length

	Quantity	Unit Heat Loss	Unit Length m	Total Length m
Pipe	50,00 m	6,2 W/m		50,00
Valve 1	1	5,6 (W)	0,90	0,90
Valve 2	0	N/A (W)	N/A	N/A
Valve 3	0	N/A (W)	N/A	N/A
Support 1	17	6,2 (W)	0,99	16,83
Support 2	0	N/A (W)	N/A	N/A
Support 3	0	N/A (W)	N/A	N/A
Flange	0	N/A (W)	N/A	0,00
Drain/Vent	0		N/A	0,00
Misc.				0,00
Terminations				2,00
Totals				69,80

Insulation

Inner Mean Temp: -2 °C
Outer Mean Temp: N/A °C
Surface Temp: -10 °C
Inner K-Factor: 0,039
Outer K-Factor: N/A
K-factor units: W/m-K

Inner Film Coeff: N/A
Outer Film Coeff: 47,1
Film Coeff Units: W/m²-K

Heater Selection

Catalog No.: 3BTV2-CT
Output Rate: 13,9 W/m
Attachment: ATE-180
Trace Ratio: 1,00
Spiral Pitch: N/A mm
Cable Set Quantity: 1
Cable Set Length: 67,80 m
Total Length: 69,80 m
Max. Circuit Length: 139,90 m

Electrical: per Cable Set

CB Current: 7,8 A
Operating Current: 4,1 A
Operating Load: 1,14 kW

Electrical: per Circuit

CB Current: 7,8 A
Operating Current: 4,1 A
Operating Load: 1,14 kW

Electrical: per Pipe Segment

Operating Load: 1,14 kW

Coldlead Catalog No:
Cableset Catalog No:

Temperatures

Min. Controlled Pipe: 15 °C
Max. Controlled Pipe: 37 °C
Uncontrolled Pipe: 65 °C
Heater Sheath: 85 °C (T-rating)
Heater Contact: N/A °C
Min Cable Spacing: N/A mm

Hot Resis. (ohms): N/A @ N/A °C
Nom. Resis. (ohms): N/A @ 20 °C
Startup Resis. (ohms): N/A @ -10 °C

Components

Power Connection: JBS-100-E
End Seal: E-100-E
Splice:
Tee:

Comment:

Error/Warning Messages:

None