



PROJECT : AAA
PROJ. NO.: CCC
CLIENT : BBB
UNIT : JJJ
DATE : 25/1/80

CLIENT P. NO.: DDD
DOC. REV. : GGG
DOC. NO.: EEE
BY : FFF

General Data:

Tag No. HHH
P&ID No. III
Service Liquid
Rupture Disk No
Protected Equipment KKK
Cause of Overpressure LLL

Process Data:

Specific Gravity 0.85 ----
Liquid Viscosity 0.90 Cp
Effective Coefficient of Discharge 0.65 ----

Operating Condition:

Maximum Operating Pressure 5.00 barg
Maximum Operating Temperature 60.00 Deg. C
Max. Allowable Working Pressure 6.80 barg

Relieving Condition:

Required Relieving Capacity 10000.0 kg/hr
Set Pressure 6.80 barg
Allowable Overpressure 10.0 %
Superimposed Back Pressure 0.50 barg
Built Up Back Pressure 0.00 barg
Relieving Temperature 150.0 Deg. C

Calculation Results:

Recommended Type CONVENTIONAL
Flow Regime NA
Total Back Pressure 0.50 barg
Reliving Pressure 7.48 barg
Combination Correction Factor (K_c) 1.00 ----
Effective Coefficient of Discharge (K_d) 0.650 ----
Capacity Correction Factor (K_w) 1.00 ----
Viscosity Correction Factor 1.00 ----
Required Discharge Area 124.000 mm²
Selected Discharge Area 126.500 mm²
Orifice Designation E ----
Inlet Size 25.4 mm
Outlet Size 50.8 mm
Actual Relieving Capacity 10198.8 kg/hr
No. of PSVs Required 1 ----



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General Data:

PSV Tag No. : HHH
P&ID No. III
Cause of Overpressure LLL
Service Liquid

Process Data:

Flow Rate 10198.8 kg/hr
Density 850.00 kg/m3
Viscosity 0.9000 Cp

Inlet Line Specifications Data:

Pipe Length 15 m
Pipe Internal Diameter 2.067 in
Pipe Roughness 0.00180 in

Fittings Quantity:

Tee thru run	0	Check valve - swing	0
Tee thru branch	1	Check valve - lift	0
Elbow - 90 deg LR	0	Check valve - stop	0
Elbow - 90 deg Std	0	Check valve - tilting disk	0
Elbow - 45 deg LR	0	Foot valve - hinged disc	0
Elbow - 45 deg Std	0	Foot valve - poppet disc	0
Close pattern return bend	0	Reducer / Expander	1
Gate valve	0	Pipe Entrance (projecting)	1
Ball valve	1	Pipe Entrance (sharp-edged)	0
Globe valve	0	Pipe Entrance (flush)	0
Angle valve	0	Pipe Exit (projecting)	0
Butterfly valve (2" - 8")	0	Pipe Exit (sharp-edged)	0
Butterfly valve (10" - 14")	0	Pipe Exit (rounded)	0
Butterfly valve (16" - 24")	0		

Calculation Results:

Velocity 1.54 m/sec
Reynolds No. 76333 ----
Friction Factor 0.0225 ----
Allowable ΔP 0.204 bar
Calculated ΔP 0.095 bar

General Notes:

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