



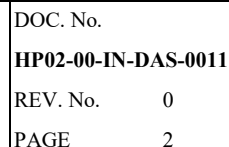




DATASHEET FOR PRESSURE VACUUM RELIEF VALVE (c/w Flame Arrester) HP02-00-IN-DAS-0011


0	12-Nov-23	Approval for Construction		D.T.T	L.V.D	N.T.S
A	16-Oct-23	Issue for Review		D.T.T	L.V.D	N.T.S
REV. NO.	DATE	DESCRIPTION		PREP'N	CHECK	REVIEW
REV. NO.	DISCIPLINE	PREPARATION	CHECK	REVIEW		APPROVAL
0	INSTRUMENT					
		D.T.T	L.V.D	N.T.S		V.L.T

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		HAI PHONG 2 PROJECT DATASHEET FOR PRESSURE VACUUM RELIEF VALVE (c/w Flame Arrester)				DOC. No. HP02-00-IN-DAS-0011		
		REV. No. 0 PAGE 3						
No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Operating Temperature	-	40	-	⁰ C		
2		Operating Pressure	-50	50	200	mmH ₂ O		
3		Product Viscosity	0.33	-	0.45	Cp		
4		Product Density	670	-	900	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	<i>Hydrocarbon/ Chemical Solvent</i>		Fluid Phase	<i>Vapor</i>		0
8		Relieving Temperature	40 ⁰ C					
9		Back Pressure Builtup	ATM		Superimposed	-		
10		Total	ATM					
11		Overpressure Factor	-					
12		Max Capacity (Nm ³ /h)	Inhale	V.T.A	Exhale	V.T.A		
13		Required Capacity (Nm ³ /h)	Inhale	534.02	Exhale	1103.7	(Note 4)	
14		Set Pressure (mmH ₂ O)	Inhale	-45	Exhale	200		
15		Molecular Weight	Refer to solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
17		% Flashing						
18		Specificaiton Heat Ratio (Cp/Cv)						
19		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Tank Data Diameter	14.63 M		Heigh	17.00 M (Note 1)		
2		Pump in Rate (m ³ /h)	300		Pump out Rate	80 (Note 2)		
3		Tank Capacity	2857.8 M ³ (Note 3)					
4		Nozzle Size	8"		Material	CS		
5		Primary/Secondary Relief	Primary Relief					
C Basic and Selection								
1		Design Code	API 2000					
2	Vent	Type	End off line					
3		Hood Material	Carbon Steel Painted					
4		Body Material	Carbon Steel Painted					
5		Lining Material	-					
6		Spring Material	-					
7		Interior Trim Material	316 SS					
8		Diaphragm Material	<i>Suitable with Hydrocarbon/Chemical solvent property</i>				0	
9		Seat Material	<i>Suitable with Hydrocarbon/Chemical solvent property</i>				0	
10		Pallet Material	<i>PPS Polyphenylene Sulfide</i>				0	
11	Connection	Size Inlet	8"		Outlet	-		
12		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	-		
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Calibration, Local Authoritues Certificate					
E General								
1		Tag-Name	PVRV-2141					
2		P&ID	HP02-00-PR-PID-014					
3		Service	TK-208 Carbon Steel					
Notes 1. Tank height is from upper T.L to lower T.L. 2. Pump operating capacity includes minimum recycle flow. 3. Working volume capacity of tank TK-208 is 2600 m3. Total tank capacity of tank TK-208 is 2857.8 m3 (from T.L to HHLL). 4. Outbreathing flowrate includes 38.88 Nm3/h of Nitrogen due to valve failed open Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No. Mft. Std. : Manufacture Standard V.T.A Vendor To Advise B.V: By Vendor								

		HAI PHONG 2 PROJECT DATASHEET FOR PRESSURE VACUUM RELIEF VALVE (c/w Flame Arrester)				DOC. No. HP02-00-IN-DAS-0011 REV. No. 0 PAGE 4		
No.	Item	Description	Requirement				Remark	Rev.
A Process Data			<i>Min</i>	<i>Normal</i>	<i>Max</i>	<i>Unit</i>		
1		Operating Temperature	-	40	-	⁰ C		
2		Operating Pressure	-50	50	200	mmH ₂ O		
3		Product Viscosity	0.33	-	0.45	Cp		
4		Product Density	670	-	900	Kg/m ³		
5		Ambient Temperature	5	-	45	⁰ C		
6		Relative Humidity			85	%		
7		Fluid Name	<i>Hydrocarbon/ Chemical Solvent</i>		Fluid Phase	<i>Vapor</i>		0
8		Relieving Temperature	40 ⁰ C					
9		Back Pressure Builtup	ATM		Superimposed	-		
10		Total	ATM					
11		Overpressure Factor	-					
12		Max Capacity (Nm ³ /h)	Inhale	V.T.A	Exhale	V.T.A		
13		Required Capacity (Nm ³ /h)	Inhale	534.02	Exhale	1103.7	(Note 4)	
14		Set Pressure (mmH ₂ O)	Inhale	-45	Exhale	200		
15		Molecular Weight	Refer to solvent property		Compressibility	-	(Z)	
16		Vapour Pr. (Pv) (Barg)			Critical Pr. (Pc)			
17		% Flashing						
18		Specificaiton Heat Ratio (Cp/Cv)						
19		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Tank Data Diameter	14.63 M		Heigh	17.00 M (Note 1)		
2		Pump in Rate (m ³ /h)	300		Pump out Rate	80 (Note 2)		
3		Tank Capacity	2857.8 M ³ (Note 3)					
4		Nozzle Size	8"		Material	CS		
5		Primary/Secondary Relief	Primary Relief					
C Basic and Selection								
1		Design Code	API 2000					
2	Vent	Type	End off line					
3		Hood Material	Carbon Steel Painted					
4		Body Material	Carbon Steel Painted					
5		Lining Material	-					
6		Spring Material	-					
7		Interior Trim Material	316 SS					
8		Diaphragm Material	<i>Suitable with Hydrocarbon/Chemical solvent property</i>				0	
9		Seat Material	<i>Suitable with Hydrocarbon/Chemical solvent property</i>				0	
10		Pallet Material	<i>PPS Polyphenylene Sulfide</i>				0	
11	Connection	Size Inlet	8"		Outlet	-		
12		Rating and Facing: Inlet	ANSI 150# - RF		Outlet	-		
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Calibration, Local Authoritues Certificate					
E General								
1		Tag-Name	PVRV-2151					
2		P&ID	HP02-00-PR-PID-015					
3		Service	TK-209 Carbon Steel					
Notes 1. Tank height is from upper T.L to lower T.L. 2. Pump operating capacity includes minimum recycle flow. 3. Working volume capacity of tank TK-209 is 2600 m3. Total tank capacity of tank TK-209 is 2857.8 m3 (from T.L to HHLL). 4. Outbreathing flowrate includes 38.88 Nm3/h of Nitrogen due to valve failed open Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No. Mft. Std. : Manufacture Standard V.T.A Vendor To Advise B.V: By Vendor								

		HAI PHONG 2 PROJECT DATASHEET FOR PRESSURE VACUUM RELIEF VALVE (c/w Flame Arrester)				DOC. No. HP02-00-IN-DAS-0011 REV. No. 0 PAGE 5		
No.	Item	Description	Requirement				Remark	Rev.
A Process Data								
1		Operating Temperature	Min	Normal	Max	Unit		
2		Operating Pressure	-	40	-	⁰ C		
3		Product Viscosity	-50	50	200	mmH ₂ O		
4		Product Viscosity	0.33	-	0.45	Cp		
5		Product Density	670	-	900	Kg/m ³		
6		Ambient Temperature	5	-	45	⁰ C		
7		Relative Humidity			85	%		
8		Fluid Name	Hydrocarbon/ Chemical Solvent			Fluid Phase	Vapor	0
9		Relieving Temperature	40 ⁰ C					
10		Back Pressure Builtup	ATM		Superimposed	-		
11		Total	ATM					
12		Overpressure Factor	-					
13		Max Capacity (Nm ³ /h)	Inhale	V.T.A	Exhale	V.T.A		
14		Required Capacity (Nm ³ /h)	Inhale	53.3	Exhale	117.72	(Note 1)	
15		Set Pressure (mmH ₂ O)	Inhale	-45	Exhale	200		
16		Molecular Weight	Refer to solvent property			Compressibility	-	(Z)
17		Vapour Pr. (Pv) (Barg)				Critical Pr. (Pc)		
18		% Flashing						
19		Specificaiton Heat Ratio (Cp/Cv)						
20		Corrosive/Erosive/Toxic	None	None	None			
B General								
1		Tank Data Diameter	4.9 M			Heigh	6.5 M (Note 2)	
2		Pump in Rate (m ³ /h)	30			Pump out Rate	37.3 (Note 3)	
3		Tank Capacity	122.6 M ³ (Note 4)					
4		Nozzle Size	4"			Material	CS	
5		Primary/Secondary Relief	Primary Relief					
C Basic and Selection								
1		Design Code	API 2000					
2	Vent	Type	End off line					
3		Hood Material	Carbon Steel Painted					
4		Body Material	Carbon Steel Painted					
5		Lining Material	-					
6		Spring Material	-					
7		Interior Trim Material	316 SS					
8		Diaphragm Material	Suitable with Hydrocarbon/Chemical solvent property					
9		Seat Material	Suitable with Hydrocarbon/Chemical solvent property					
10		Pallet Material	PPS Polyphenylene Sulfide					0
11	Connection	Size Inlet	4"			Outlet	-	
12		Rating and Facing: Inlet	ANSI 150# - RF			Outlet	-	
D Purchase and service								
1		Manufacturer	B.V					
2		Model	B.V					
3		Certification	Material, Calibration, Local Authoritues Certificate					
E General								
1		Tag-Name	PVRV-2161					
2		P&ID	HP02-00-PR-PID-016					
3		Service	TK-207 Carbon Steel					
Notes 1. Breath out includes 38.88 Nm ³ /h of Nitrogen due to valve failed open. 2. Tank height is from upper T.L to lower T.L. 3. Pump operating capacity includes minimum recycle flow. 4. Working volume capacity of tank TK-207 is 1600 m ³ . Total tank capacity of tank TK-207 is 122.6 m ³ (from T.L to HHLL). Stainless Steel tag plate shall be stamped with Tag-name, Manufacture Name, Set Pressure, Model No. Mft. Std. : Manufacture Standard V.T.A Vendor To Advise B.V: By Vendor								

SOLVENT PROPERTY

Name	BP -°C	FP - °C	VP @20°C kPa	Density @20°C-kg/m³	Viscosity mPa.s @20°C
Acetone	56	-18	24.7	790-792	0.33
Butyl acetate	126	24	10.7	900	NA
Ethyl acetate	74-78	-4	9.8	900	0.45
Hexane	65-69	-27	19	675	NA
Isopropanol	82-83	12	4.1	NA	NA
Methyl ethyl ketone	70-80.5	-4	9.5	NA	0.42
Methyl isobutyl ketone	114-117	14	1.9	NA	NA
Sec-butyl acetate	112	16	3.3@25°C	870	NA
S-97	50-135	<0	NA	670-755 @15°C	NA
Solvent xylene	136-145	21-27	0.8-1.2	870 @15°C	
Thinner 2T (TAK-001)	75-105	3	NA	839	NA
Thinner 3T (TAK-002)	80-130	3	NA	851	NA
Toluene	110-111	6	3-3.5	871 @ 15°C	NA
TOPSol 3040 ^a	162-192	41-42	0.37	783 @ 15°C	NA
TOPSol A100	150-185	38-50	0.21-1.3	876 @ 15°C	NA
TOPSol A150	179-214	62-65.6	NA	893 @ 15°C	NA
Isomer xylene	137-143	23-27	0.8-1.2	870 @ 15°C	NA
Xylene	136-145	23-27	0.8-1.2	870 @ 15°C	NA
Hexane extraction	65.69	27	19	670 -675 @15°C	NA
Isobutyl acetate	117.2	18	1.7@25°C	871@15°C	NA
TOPSol Extraction	65.69	27	19	670 -675 @15°C	NA

Abbreviations:

BP: Boiling point

FP: Flash point

VP: Vapour pressure