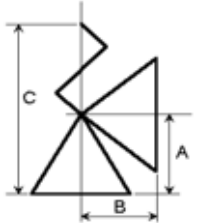
 <p>EMERSON edgardovicente.chiari@emerson.com</p> <p>Madrid, Spain +34 911 111 320 edgardovicente.chiari@emerson.com</p>				Pressure Relief Valve Sizing & Selection Report							
				0	EVC			27-jul.-2021			
Quote Number: 093-093				No	Prpd.	Chk.	Appr.	Date	Revision		
Client: TECHNIP ENERGIES				End-User Ref. No.: 201754C001							
Location: CARTAGENA, SPAIN				Project Ref. No.: U-608 Hydrogen Unit							
Project: C43 "New Bios 2G Hydrotreatment Unit"											
1	Valve ID				41	SIZING DATA					
2	Tag No.	608-PSV-1047			42	Design Code	ASME VIII/XIII - UV		Sizing Std.	API 520	
3	Service	E-520 shell side inlet			43	Sizing Basis	Blocked-in heat-on				
4	PID No.	P-C43-A-110990 H47			44	Fluid State at Inlet	Gas / Vapor				
5	Line No.	2"P-4701-B4		Quantity	45	Relieving Case	Pressure Relief				
6				1	46	Fluid Properties					
7	GENERAL				47	Fluid Name		PROCESS GAS			
8	Valve Type	Balanced Bellows, Direct Spring-Op			48	Molecular Weight, M		28.20			
9	Safety / Relief	Safety	Balanced	Yes	49	Compressibility, Z		0.987			
10	Nozzle	Full	Bonnet	Vented	50	Ratio of Sp. Heats, k (Cp / Cv)		1.323			
11	CONNECTIONS				51	Gas Constant, C		265.1			
12	Inlet	1 1/2"	Flngd.	300# RF	Standard	52					
13	Outlet	2"	Flngd.	150# RF	ASME B16.5	53					
14	MATERIALS OF CONSTRUCTION				54						
15	Body / Base	CS SA216-WCB/WCC			55						
16	Bonnet / Cylinder	CS SA216-WCB/WCC			56						
17	Nozzle	316 SST			57						
18	Disc	316 SST			58						
19	Seat	Metal			59	Sizing Coefficients		Unit	-		
20	Spindle	416 SST			60	Effective K, Gas		0.975			
21	Guide	SS A297 Gr. HE			61	Kb	Kc	0.936	1		
22	Spring	Chrome Steel - Corr. Rest.			62						
23	Gaskets	316 SST			63						
24	Bellows	Inconel® 625			64	Required Capacity		Unit	kg/hr		
25	Cap Type	Screwed w/ Test Rod			65	Total		894			
26	NACE MR0175/ISO 15156:2015	No			66						
27	Accessories	Bug Screen			67	Pressures		Unit	kg/cm² g		
28					68	MAWP	Operating	5.8	0.3		
29					69	Set	CDTP	5.8	5.800		
30					70	Over Pressure		0.58	10%		
31	SIZING / SELECTION SUMMARY				71	Back Pressure		Built-Up		0.5	
32	Valve Model No.	1.5F2JBS-E35K-PSPL			72			Constant Superimposed		0.3	
33	Brand	Crosby®			73			Variable Superimposed		1.5	
34	Area	Calculated	Selected	1.701	1.981	74			Total		2.3
35	(cm²)	Data Set	Orifice	API	F	75	Inlet Loss		0	0%	
36	Flow	Unit	Required	kg/hr	894	76	Atmospheric (Barometric)		1.033	kg/cm² a	
37			Maximum		1041.174	77	Temperatures		Unit	°C	
38						78	Normal System				
39	Reaction Force, Open Discharge		101.3 N			79	Operating	Relieving	21	46.6	
40	Noise Level (db), Open Discharge		116.7 at 1.0000-m			80	Design Min	Design Max		220	
Tag Notes	1. Standard C4M acc. ISO 12944 2. Opening Adjustment 5% 3. ASME "UV" Stamp required.					Valve Dimensions	mm	A			
								123.95			
								B			
								152.40			
								C			
								603.25			
kg	Weight	22.68									