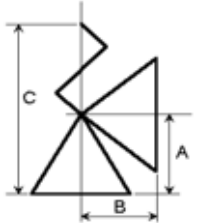
 <p>EMERSON edgardovicente.chiari@emerson.com</p> <p>Madrid, Spain +34 911 111 320 edgardovicente.chiari@emerson.com</p>				Pressure Relief Valve Sizing & Selection Report						
				0	EVC			27-jul.-2021		
Quote Number: 093-093				No	Prpd.	Chk.	Appr.	Date	Revision	
Client: TECHNIP ENERGIES				End-User 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-TSV-1058			42	Design Code	ASME VIII/XIII - UV		Sizing Std.	API 520
3	Service	E-308 CW side			43	Sizing Basis	Thermal Expansion			
4	PID No.	P-C43-A-110990 H51			44	Fluid State at Inlet	Liquid			
5	Line No.	3/4"-CWR-5112-C6	Quantity		45	Relieving Case	Pressure Relief			
6			1		46	Fluid Properties				
7	GENERAL				47	Fluid Name	COOLING WATER			
8	Valve Type	Conventional, Direct Spring-Op			48	Sp. Gravity, G	0.989			
9	Safety / Relief	Safety Relief	Balanced	No	49	Viscosity	0.55303 cSt			
10	Nozzle	Full	Bonnet	Closed	50	Reynolds No.	3649.39			
11	CONNECTIONS				51	Reynolds No. (max)	770823.29			
12	Inlet	3/4"	Thrd.	MNPT	Standard	52				
13	Outlet	1"	Thrd.	FNPT	ASME B1.20.1	53				
14	MATERIALS OF CONSTRUCTION				54					
15	Body Cylinder	CS SA216-WCB			55					
16	Body Base	316 SST			56					
17	Connections	N/A			57					
18	Disc	316 SST			58					
19	Seat	Metal			59	Sizing Coefficients				
20	Seals	N/A			60	Effective K, Liquid	0.65		Unit	-
21	Spindle	416 SST			61	Kw	Kc	1.0	1	
22	Guide	316 SST			62	Kv	Kv (max)	0.959	1.0	
23	Spring	17-7 PH SST			63					
24					64	Required Capacity			Unit	kg/hr
25	Cap Type	Screwed & Test Rod			65	Total	53.67			
26	NACE MR0175/ISO 15156:2015	No			66					
27	Accessories				67	Pressures			Unit	kg/cm² g
28					68	MAWP	Operating	24	3.8	
29					69	Set	CDTP	24	24.00	
30					70	Over Pressure		2.4	10%	
31	SIZING / SELECTION SUMMARY				71	Back Pressure	Built-Up	2.4		
32	Valve Model No.	961101MFB-P			72		Constant Superimposed	0		
33	Brand	Crosby®			73		Variable Superimposed	0		
34	Area	Calculated	Selected	0.004	0.710		74	Total	2.4	
35	(cm²)	Data Set	Orifice	API	6	75	Inlet Loss	0	0%	
36	Flow	Unit	Required	kg/hr	53.67	76	Atmospheric (Barometric)	1.033 kg/cm² a		
37			Maximum		11336.151	77	Temperatures			
38						78	Normal System			
39	Reaction Force, Open Discharge		19.8 N		79	Operating	Relieving	39	50	
40	Noise Level (db), Open Discharge		N/A		80	Design Min	Design Max		100	
Tag Notes	1. Standard C4M acc. ISO 12944 2. Opening Adjustment 5% 3. ASME "UV" Stamp required.				Valve Dimensions	mm	A			
							79.38			
							B			
							49.21			
							C			
	307.98									
	kg	Weight	4.54							