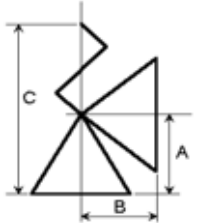
 <p>EMERSON edgardovicente.chiari@emerson.com</p> <p>Madrid, Spain +34 911 111 320 edgardovicente.chiari@emerson.com</p>				<p align="center">Pressure Relief Valve Sizing & Selection Report</p> <p align="right">27-jul.-2021</p>					
<p>Quote Number: 093-093</p>				No	Prpd.	Chk.	Appr.	Date	Revision
<p>Client: TECHNIP ENERGIES</p> <p>Location: CARTAGENA, SPAIN</p> <p>Project: C43 "New Bios 2G Hydrotreatment Unit"</p>									
<p>End-User Ref. No.: 201754C001</p> <p>Project Ref. No.: U-608 Hydrogen Unit</p>									
1	Valve ID				41	SIZING DATA			
2	Tag No.	608-TSV-1050			42	Design Code	ASME VIII/XIII - UV		
3	Service	E-741 CW side			43	Sizing Basis	Thermal Expansion		
4	PID No.	P-C43-A-110990 H43			44	Fluid State at Inlet	Liquid		
5	Line No.	3/4"CWR-4312-B1	Quantity	1	45	Relieving Case	Pressure Relief		
6					46	Fluid Properties			
7	GENERAL				47	Fluid Name	COOLING WATER		
8	Valve Type	Conventional, Direct Spring-Op			48	Sp. Gravity, G	0.980		
9	Safety / Relief	Safety Relief	Balanced	No	49	Viscosity	0.43824 cSt		
10	Nozzle	Full	Bonnet	Closed	50	Reynolds No.			
11	CONNECTIONS				51	Reynolds No. (max)	508437.17		
12	Inlet	3/4"	Thrd.	MNPT	52				
13	Outlet	1"	Thrd.	FNPT	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		
21	Spindle	416 SST			61	Kw	Kc	1.0	1
22	Guide	316 SST			62	Kv	Kv (max)		1.0
23	Spring	17-7 PH SST			63				
24					64	Required Capacity			
25	Cap Type	Screwed & Test Rod			65	Total			
26	NACE MR0175/ISO 15156:2015	No			66				
27	Accessories				67	Pressures			
28					68	MAWP	Operating	6.5	4
29					69	Set	CDTP	6.5	6.500
30					70	Over Pressure		0.65	10%
31	SIZING / SELECTION SUMMARY				71	Back Pressure	Built-Up	0.65	
32	Valve Model No.	961101MFB-P			72		Constant Superimposed	0	
33	Brand	Crosby®			73		Variable Superimposed	0	
34	Area	Calculated	Selected	0.710	74		Total	0.65	
35	(cm²)	Data Set	Orifice	API	75	Inlet Loss	0	0%	
36	Flow	Unit	Required	L/min	76	Atmospheric (Barometric)	1.033 kg/cm² a		
37			Maximum	99.844	77	Temperatures			
38					78	Normal System			
39	Reaction Force, Open Discharge		5.4 N		79	Operating	Relieving	39	65.6
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						