PULSATION DAMPER MECHANICAL DATA SHEET FOR NITROGEN GAS BOOSTER

	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
Document Review	
Issue Purpose:	AFC
Result Code: AP,AN,CM,RE,NC	AN
Next Status : IFC,IFA,IFI,AFC,AB	AFC
Responsible Department	MECHANICAL
Commented Date	May/11/2022
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Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
05	06/05/2022	Approved for Construction	KP	CL	JR	
04	25/04/2022	Approved for Construction	KP	CL	JR	
03	13/04/2022	For approval	KP	CL	JR	
02	10/03/2022	For approval	KP	CL	JR	
01	28/02/2022	For approval	KP	CL	JR	
00	11/12/2020	For approval	KP	KP	KP	
					Class: 1	Phase: P

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TABULATION OF REVISED PAGES

Page	D00	D01	D02	D03	D04
1.	X	X	X	X	X
2.	X	X	X	X	X
3.	X	X	X	X	
4.		X	X	X	
5.					

Page	D05				
1.	X				
2.	X				
3.					
4.					
5.					

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VENDOR		Pulsation damper mechanical datasheet	P.O. No.	52-98/445
			Document No.	17811-11C
			Sheet No.	3
			Rev.No	5
CONTRACTOR / END USER	BUSHEHR PETROCHEMICAL COMPANY MEG Unit shall be same			
			Service	nitrogen compressor package

1			**1st stage inlet pulsation damper (20-**
2	OPERATING PRESSURE	Bar(a)	**9 bar(a)**
3	DESIGN PRESSURE	Bar(g)	**14,5 bar(g)**
4	HYDROTEST PRESSURE		**1.3 X MAWP as per ASME VIII**
5	OPERATING TEMPERATURE	°C	**5-52**
6	DESIGN TEMPERATURE	°C	**0-85**
7	DESIGN CODE		**ASME VIII Div. 1 Ed. 2021**
8	MATERIAL CERTIFICATE		**3.1**
9	MATERIAL OF CONSTRUCTION		**Shell /pipes : SA106 gr B, Heads : SA234 WPB, flanges : SA105**
10	NOZZLE SIZE INLET/OUTLET		**2" 150# for inlet and outlet, 1/2 NPT-F for drain**
11	DIMENSIONS	DIAx TT	**12" X 1100 mm**
12	WEIGHT EMPTY	kg	**120**
13	WEIGHT FILLED WITH WATER	kg	**210**
14	CAPACITY	Liters	**96**
15	TESTING AS PER CODE		**ASME VIII Div. 1 Ed. 2021**
16	CORROSION ALLOWANCE	mm	**3**
17	PWHT	Yes/No	**No**
18	THICKNESS	mm	**9,52**
19	Design aproach		**API 618 Design approach 2**
20	Maximum Allowable Compressor Cylinder Flange Pressure Pulsation as per clause 7.9.4.2.5.2.1 of API618.		**6,64%**
21	Maximum Allowable Pressure Drop as per clause 7.9.4.2.5.3.1 of API 618.	Bar	**0,18**
23	Maximum Allowable Pulsation Limits at and Beyond Line-side Nozzles of Pulsation Suppression Devices as per clause 7.9.4.2.5.2.2.1 of API 618.	bar	**0,536**
24			**1st stage outlet pulsation damper (20-DC-1002-2)**
25	OPERATING PRESSURE	Bar(a)	**15,5 bar(a)**
26	DESIGN PRESSURE	Bar(g)	**26 bar(g)**
27	HYDROTEST PRESSURE		**1.3 X MAWP as per ASME VIII**
28	OPERATING TEMPERATURE	°C	**134**
29	DESIGN TEMPERATURE	°C	**0-170**
30	DESIGN CODE		**ASME VIII Div. 1 Ed. 2021**
31	MATERIAL CERTIFICATE		**3.1**
32	MATERIAL OF CONSTRUCTION		**Shell /pipes : SA106 gr B, Heads : SA234 WPB, flanges : SA105**
33	NOZZLE SIZE INLET/OUTLET		**2" 300# for inlet and outlet, 1/2 NPT-F for drain**
34	DIMENSIONS	DIAx TT	**12" X 1100 mm**
35	WEIGHT EMPTY	kg	**110**
36	WEIGHT FILLED WITH WATER	kg	**190**
37	CAPACITY	Liters	**96**
38	TESTING AS PER CODE		**ASME VIII Div. 1 Ed. 2021**
39	CORROSION ALLOWANCE	mm	**3**
40	PWHT	Yes/No	**No**
41	THICKNESS	mm	**9,52**
43	Design aproach		**API 618 Design approach 2**
44	Maximum Allowable Compressor Cylinder Flange Pressure Pulsation as per clause 7.9.4.2.5.2.1 of API618.	Bar	**6,64%**
45	Maximum Allowable Pressure Drop as per clause 7.9.4.2.5.3.1 of API 618.	Bar	**0,15**
46	Maximum Allowable Pulsation Limits at and Beyond Line-side Nozzles of Pulsation Suppression Devices as per clause 7.9.4.2.5.2.2.1 of API 618.	bar	**1,433**
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49	**NOTES:**		
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VENDOR	Pulsation damper mechanical datasheet	P.O. No.	52-98/445
		Document No.	17811-11C
		Sheet No.	4
		Rev.No	4
CONTRACTOR / END USER	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT		
		Service	nitrogen compressor package

1	**2nd stage inlet pulsation damper (20-DC-1002-3)**		
2	OPERATING PRESSURE	Bar(a)	**14,5 bar(a)**
3	DESIGN PRESSURE	Bar(g)	**26 bar(g)**
4	HYDROTEST PRESSURE		**1.3 X MAWP as per ASME VIII**
5	OPERATING TEMPERATURE	°C	**50**
6	DESIGN TEMPERATURE	°C	**0-85**
7	DESIGN CODE		**ASME VIII Div. 1 Ed. 2021**
8	MATERIAL CERTIFICATE		**3.1**
9	MATERIAL OF CONSTRUCTION		**Shell /pipes : SA106 gr B, Heads : SA234 WPB, flanges : SA105**
10	NOZZLE SIZE INLET/OUTLET		**2" 300# for inlet and outlet, 1/2 NPT-F for drain**
11	DIMENSIONS	DIAx TT	**10" X 600 mm**
12	WEIGHT EMPTY	kg	**75**
13	WEIGHT FILLED WITH WATER	kg	**115**
14	CAPACITY	Liters	**38**
15	TESTING AS PER CODE		**ASME VIII Div. 1 Ed. 2021**
16	CORROSION ALLOWANCE	mm	**3**
17	PWHT	Yes/No	**No**
18	THICKNESS	mm	**9,27**
20	Design aproach		**API 618 Design approach 2**
21	Maximum Allowable Compressor Cylinder Flange Pressure Pulsation as per clause 7.9.4.2.5.2.1 of API618.		**4,54%**
22	Maximum Allowable Pressure Drop as per clause 7.9.4.2.5.3.1 of API 618.	Bar	**0,0636**
23	Maximum Allowable Pulsation Limits at and Beyond Line-side Nozzles of Pulsation Suppression Devices as per clause 7.9.4.2.5.2.2.1 of API 618.	bar	**0,739**
25	**2nd stage outlet pulsation damper (20-DC-1002-4)**		
26	OPERATING PRESSURE	Bar(a)	**23,5 bar(a)**
27	DESIGN PRESSURE	Bar(g)	**26 bar(g)**
28	HYDROTEST PRESSURE		**1.3 X MAWP as per ASME VIII**
29	OPERATING TEMPERATURE	°C	**83**
30	DESIGN TEMPERATURE	°C	**0-85**
31	DESIGN CODE		**ASME VIII Div. 1 Ed. 2021**
32	MATERIAL CERTIFICATE		**3.1**
33	MATERIAL OF CONSTRUCTION		**Shell /pipes : SA106 gr B, Heads**
34	NOZZLE SIZE INLET/OUTLET		**2" 300# for inlet and outlet, 1/2**
35	DIMENSIONS	DIAx TT	**10" X 800 mm**
36	WEIGHT EMPTY	kg	**85**
37	WEIGHT FILLED WITH WATER	kg	**130**
38	CAPACITY	Liters	**48**
39	TESTING AS PER CODE		**ASME VIII Div. 1 Ed. 2021**
40	CORROSION ALLOWANCE	mm	**3**
41	PWHT	Yes/No	**No**
42	THICKNESS	mm	**9,27**
44	Design aproach		**API 618 Design approach 2**
45	Maximum Allowable Compressor Cylinder Flange Pressure Pulsation as per clause 7.9.4.2.5.2.1 of API618	Bar	**4,54%**
46	Maximum Allowable Pressure Drop as per clause 7.9.4.2.5.3.1 of API 618.	Bar	**0,0603**
47	Maximum Allowable Pulsation Limits at and Beyond Line-side Nozzles of Pulsation Suppression Devices as per clause 7.9.4.2.5.2.2.1 of API 618.	bar	**0,9**
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48	**NOTES:**		
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Please consider at least 15 C margin between operating temperature and design temperature. 2C is not enough and logical.