











OWNER:  شرکت سست و پوی آوند ایرانیاان (سهامی خاص)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
	MC :  شرکت سست و پوی آوند ایرانیاان (سهامی خاص)	<b>PULSATION DAMPER MECHANICAL DATA SHEET FOR NITROGEN GAS BOOSTER</b>							
Owner Document Number: 17811-11C	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
	BU	20	VD	303	ME	DSH	0027	Rev.: 04	Page 1 of 4

## PULSATION DAMPER MECHANICAL DATA SHEET FOR NITROGEN GAS BOOSTER

 شرکت سست و پوی آوند ایرانیاان (سهامی خاص)	 Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
<b>Document Review</b>		
Issue Purpose:	AFC	
Result Code: AP,AN,CM,RE,NC	AN	
Next Status : IFC,IFA,IFI,AFC,AB	AFC	
Responsible Department	MECHANICAL	
Commented Date	Apr/25/2022	
<b>Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract.</b>		



04	25/04/2022	<b>Approved for Construction</b>	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	
Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
					Class: 1	Phase: P

<b>OWNER:</b>  شرکت سست موبلی آوند ایرانیا (سازمان تخصصی)	<b>BUSHEHR PETROCHEMICAL COMPANY MEG PLANT</b>						<b>EPC CONTRACTOR:</b>  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
	<b>PULSATION DAMPER MECHANICAL DATA SHEET FOR NITROGEN GAS BOOSTER</b>						 Netherlands		
<b>MC :</b>  شرکت سست موبلی آوند ایرانیا (سازمان تخصصی)	<b>Project</b>	<b>Area</b>	<b>Phase</b>	<b>Unit</b>	<b>Dis.</b>	<b>Doc.</b>	<b>Seq.</b>	<b>Contract No : 52-98/445</b>	
<b>Owner Document Number: 17811-11C</b>	<b>BU</b>	<b>20</b>	<b>VD</b>	<b>303</b>	<b>ME</b>	<b>DSH</b>	<b>0027</b>	<b>Rev.:</b>	<b>Page</b>
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		<b>Pulsation damper mechanical datasheet</b>		P.O. No.	52-98/445
				Document No.	17811-11C
				Sheet No.	3
				Rev.No	4
			<b>BUSHEHR PETROCHEMICAL COMPANY MEG PLANT</b>		
CONTRACTOR / END USER			Service: nitrogen compressor package		
<b>1st stage inlet pulsation damper (20-DC-1002-1)</b>					
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		
<b>1st stage outlet pulsation damper (20-DC-1002-100)</b>					
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	<b>NOTES:</b>				
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Repetitive comment :  
 With reference to  
 mechanical data sheet of  
 nitrogen compressor and  
 P&ID of nitrogen  
 compressor, design  
 temperature is 210 C.

		<b>Pulsation damper mechanical datasheet</b>		P.O. No.	52-98/445
				Document No.	17811-11C
				Sheet No.	4
				Rev.No	4
			<b>BUSHEHR PETROCHEMICAL COMPANY MEG PLANT</b>		
			Service		nitrogen compressor package
<b>2nd stage inlet pulsation damper (20-DC-1002-3)</b>					
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	DIxT	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 approach		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	<b>2nd stage outlet pulsation damper</b>				
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 : SA234 WPB, flanges : SA105		
34	NOZZLE SIZE INLET/OUTLET		2" 300# for inlet and outlet, 1/2 NPT-F for drain		
35	DIMENSIONS	DIxT	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 approach		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	<b>NOTES:</b>				
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Please check it again.  
with reference to P&ID of  
nitrogen compressor TAHH  
(10155) is 140 C. Therefore,  
design temperature shall not be  
less than 140 C.