




OGDCL PAKISTAN:
OIL & GAS DEVELOPMENT
COMPANY LIMITED

NASHPA COMPRESSION PROJECT PHASE-II

ISSUED FOR TENDER

0	9-Mar-2018	ISSUED FOR TENDER	WAS	SJA	NAS	MHQ	TH		
REV	DATE	DESCRIPTION	ORIG	CHKD	LE	QA	PM	LPE/TA	LA MFM MP
REVISIONS			APPROVAL					OWNER APPROVAL	
 ENAR PETROTECH SERVICES (PVT.) LTD. 7-B, KORANGI INDUSTRIAL AREA, KORANGI-KARACHI			TITLE : DOCUMENT TITLE: DATA SHEET OF FLOW ELEMENT (ORIFICE TYPE)						
			DOCUMENT NO: 0193 DS 6001 0						
PROJECT NO. 14-0193			CODE		DOC. TYPE		SEQ. NO.		REV

 ENAR PETROTECH SERVICES (PVT.) LTD.		Flow Element (Orifice Type)		DATA SHEET NO.	0193-DS-6001
				SHEET	2 of 2
				DATE	9/3/2018
				REV.	0
				PREPARED BY	WAS
				CHECKED BY	SJA
				APPROVED BY	NAS
		OWNER:	OIL & GAS DEVELOPMENT COMPANY LIMITED (OGDCL)		
		PROJECT:	NASHPA COMPRESSION PROJECT PHASE-II		
1	Tag no	Note-5	FE-3002		
2	Service		Fuel gas knock-out pot V-3001 outlet flow		
3	Line No		8"-30-FG-006-A2		
4	P&ID No.		NGP-001-PCS-15.09-0024-14		
5	PROCESS SERVICE CONDITIONS				
6	Fluid		Fuel Gas		
7	State		Gas		
8	Flow Max.	(MMSCFD)	6.51		
9	Flow Oper.	(MMSCFD)	5.92		
10	Flow Min.	(MMSCFD)	3.34		
11	Pressure Max.	(psig)	90		
12	Pressure Oper.	(psig)	-		
13	Pressure Min.	(psig)	-		
14	Temperature Max.	(°F)	95		
15	Temperature Oper.	(°F)	-		
16	Temperature Min.	(°F)	-		
17	Density Gas at STP		-		
18	Specific Gravity at Oper. Cond.		-		
19	Density at Oper. Cond.	(lb/ft ³)	0.32		
20	Super Comp. Factor at Oper. Cond. Zf (Gas)		-		
21	Vapor Pressure	(psia)	-		
22	Viscosity at Oper. Cond. (Liquid)		-		
23	Viscosity at Oper. Cond. (Gas)		0.012		
24	Steam Quality %		-		
25	K = Cp/Cv Isentropic Exponent		-		
26	Compressibility Factor		-		
27	Vapor/Liquid (Fraction)		-		
28	MEASURING STATION DATA				
29	Line size.	(Inches)	8"		
30	Line & Flange I.D.	(Inches)	8" Sch 40		
31	Calculated Orifice I.D.	(mm)	103.495 (VTA)		
32	Beta Ratio		0.51504 (VTA)		
33	Pressure Drop	(Inches W.C)	100		
34	GENERAL SPECIFICATION				
35	Orifice Plate	Note-9	Concentric	Orifice Flanges (Flange I.D. should match Line I.D.) Note-3	
36	Plate Type		Square Edge	Rating & Facing	ASME CL 150#, RF
37	Plate Material		316 SS		
38	Drain / Vent Hole (Yes/No)		Yes	Type & Material	Not Required
39	Handle		As per Standard	Tap Type	Not Required
40	Plate Thickness		ISO 5167 Standard.	Tap Size	Not Required
41	Bore for Maximum Flow (Yes/No)		Yes	Gasket/Studs/Nuts	Not Required
42	Make to ISO 5167 Standard and Stamp to ISA Standard.		Yes	Gasket Material	Not Required
43	NACE Compliance		No		
44	NOTES: *VTA:- Vendor to Advise				
	1- All Threaded connection according to NPT B1.20.1 unless otherwise specified.				
	2- Vendor to submit calculation for review with Bid and also provide basis of calculation.				
	3- Existing Orifice plate will be replaced with new whereas existing Flange shall be re-used.				
	4- Orifice plate shall be compatible for installation with RF flanges.				
	5- Existing Flow Element tag # FE-3002 shall be replaced with New. However Existing DP-Type Flow Transmitter tag # FT-3002 shall be re-used.				
	6- Specification for General & Packaged Instrumentation # 0193-IMA-6000 shall be referred for details				
	7- This Data Sheet is developed based on preliminary information, Contractor shall develop detail Data Sheet and confirm all parameters during detail engineering stage.				
	8- Upstream side of the orifice shall be clearly marked/embossed on Orifice Plate as "INLET". Upstream side shall be square and sharp without any sort of defects.				
	9- Orifice plate handle is to be stamped with the following as minimum;				
	(i) Tag-No.			(iv) Material of construction	
	(ii) Job-No.			(v) Flange rating on the upstream side of the plate.	
	(iii) Orifice Bore			(vi) Pipe I.D and Schedule	