PRE-BID CLARIFICAITON AGAINST TENDER ENQUIRY NO. PROC-FB/CB/PROD-4038/2018 FOR PIPE FITTINGS

S. No.	Clarification from Prospective Bidder	OGDCL's Reply
1	Our Principals have suggested that Material of Orifice Plates should be UNS 31803, instead of A105.	The orifice plate material in all orifice plate data sheets may please be corrected as UNS S31803 instead of ASTM A-105 (Revised data Sheets are attached).
2	Item 48 of Schedule of Requirement (Annexure-A) Cannot see the quantity on the scanned page.	Quantity of Item No. 48 of Schedule of Requirement (Annexure-A) is **16 Nos.** (Reducer Concentric 4" X 3", Sch-160, A-234, GR. WPB, BW, NACE MR 0175, B16.9)

Note: All prospective bidders are requested to submit their bid accordingly.

CLIENT	DEVELOPMENT OF BHAMBRA AND THAL WELLHEADS		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	3279-PDS-005	REV. 0

FLUID DATA	1	Tag Number		FE-001	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		7	
	6	Normal Flow (MMSCFD)		5.7	
	7	Min Flow (MMSCFD)		3	
	8	Pressure PSIG		1355	
	9	Temperature ^{O} F		73	
	10	Specific Gravity		0.7-0.8	
	11	Comp. Factor Z		0.8091	
	12	CP/CV		1.704	
	13	Op. Viscosity Up Stream cP		0.0147	
	14	Base Press (psia)	Base Temp ^{0}F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		300" W.C	
	20	Beta = d/D		0.34	
	21	Orifice Bore Diameter		1.24 "	
	22	Line I.D		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

Rev.	Date	Description	Prepared	Checked	Approved
0	25/5/2018	Issued For Review	RK	RK	AJ

CLIENT	DEVELOPMENT OF BHAMBRA AND THAL WELLHEADS		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	3279-PDS-105	REV. 0

FLUID DATA	1	Tag Number		FE-101	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		23.5	
	6	Normal Flow (MMSCFD)		20	
	7	Min Flow (MMSCFD)		8.7	
	8	Pressure PSIG		1342	
	9	Temperature ^{O}F		148	
	10	Specific Gravity		0.77	
	11	Comp. Factor Z		0.8749	
	12	CP/CV		1.469	
	13	Op. Viscosity Up Stream cP		0.0160	
	14	Base Press (psia)	Base Temp ^{0}F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		350" W.C	
	20	Beta = d/D		0.61	
	21	Orifice Bore Diameter		2.23"	
	22	Line I.D		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

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Rev.	Date	Description	Prepared	Checked	Approved
0	25/5/2018	Issued For Review	RK	RK	AJ

CLIENT	DEVELOPMENT OF BHAMBRA AND THAL WELLHEADS		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	3279-PDS-205	REV. 0

FLUID DATA	1	Tag Number		FE-201	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		17.2	
	6	Normal Flow (MMSCFD)		15.7	
	7	Min Flow (MMSCFD)		4.5	
	8	Pressure PSIG		1166	
	9	Temperature ^{O} F		80	
	10	Specific Gravity		0.66	
	11	Comp. Factor Z		0.8098	
	12	CP/CV		1.693	
	13	Op. Viscosity Up Stream cP		0.0137	
	14	Base Press (psia)	Base Temp ^{0}F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		300" W.C	
	20	Beta = d/D		0.57	
	21	Orifice Bore Diameter		2.089"	
	22	Line I.D		3.624"	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

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0	25/5/2018	Issued For Review	RK	RK	AJ

CLIENT	DEVELOPMENT OF BITRISM WELL 1A &TIE-IN		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFCE PLATE)	
	DOC. NO.	2664-PDS-109	REV. B

FLUID DATA	1	Tag Number		FE-101	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		Gas & liquid	
	5	Max. Flow (MMSCFD)		5	
	6	Normal Flow (MMSCFD)		_	
	7	Min Flow (MMSCFD)		_	
	8	Pressure PSIG		1400-1580	
	9	Temperature ^{O} F		130/ 150	
	10	Specific Gravity		0.7-0.8	
	11	Comp. Factor Z		0.741	
	12	CP/CV		1.445	
	13	Op. Viscosity Up Stream cP		1.40E-02	
	14	Base Press (psia)	Base Temp ^{0} F	14.7	60
	15	Design Pressure PSIG		1600	
METER	16	Type of meter		DP CELL	
	17	Diff. Range --- Dry		100 " W.C	
	18	Static Press. Range		*	
	19	Calibration Units		MMSCFD	
	17	Diff. Range		100 " W.C	
	20	Beta = d/D		0. 471*	
	21	Orifice Bore Diameter		2.013*	
	22	Line I.D mm		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		80	
	27	Concentric/Other		Cocentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

CLIENT	DEVELOPMENT OF CHABARO-1 WELLHEAD		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	2734-PDS-005	REV. 0

FLUID DATA	1	Tag Number		FE-001		
	2	Service		WELL HEAD FLOW LINE		
	3	Line Size		4"		
	4	Fluid State		GAS & LIQUID		
	5	Max. Flow (MMSCFD)		16		
	6	Normal Flow (MMSCFD)		10		
	7	Min Flow (MMSCFD)		4		
	8	Pressure PSIG		1000-1620		
	9	Temperature ^{O} F		100-150		
	10	Specific Gravity		0.7-0.8		
	11	Comp. Factor Z		0.7616		
	12	CP/CV		1.7		
	13	Op. Viscosity Up Stream cP		0.017		
	14	Base Press (psia)	Base Temp ^{0} F	14.7	60	
	15	Design Pressure PSIG		1700		
	17	Diff. Range		100" W.C		
	20	Beta = d/D		0.54		
	21	Orifice Bore Diameter		1.959"		
	22	Line I.D		3.624 "		
	23	Flange Rating		900#		
	24	Vent or Drain Hole		YES		
	25	Plate Thickness		Note-4		
	26	Pipe Schedule		120		
	27	Concentric/Other		Concentric		
	28	Sq.Edged / Other		Sq. Edge		
	29	Flange Taps / Other		Flange Taps		
	30	Flange R.F / Other		RTJ		
	31	Flange Type W.N/ Other		W.N		
	32	Material		UNS S31803		

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

Rev.	Date	Description	Prepared	Checked	Approved
0	6/7/2017	Issued For Review	RK	NWS	AJ

CLIENT	DEVELOPMENT OF GUNDANWARI-1 WELLHEAD		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	2731-PDS-305	REV. 0

FLUID DATA	1	Tag Number		FE-301	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		20	
	6	Normal Flow (MMSCFD)		10	
	7	Min Flow (MMSCFD)		7	
	8	Pressure PSIG		1000-1600	
	9	Temperature ^{0} F		100-150	
	10	Specific Gravity		0.7-0.8	
	11	Comp. Factor Z		0.8511	
	12	CP/CV		1.502	
	13	Op. Viscosity Up Stream cP		0.01522	
	14	Base Press (psia)	Base Temp ^{0} F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		100" W.C	
	20	Beta = d/D		0.58	
	21	Orifice Bore Diameter		2.105*	
	22	Line I.D		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

Rev.	Date	Description	Prepared	Checked	Approved
0	8/6/2017	Issued For Review	ASK	NWS	AJ

CLIENT	DEVELOPMENT OF MITHRI-1 WELLHEAD		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	2732-PDS-405	REV. A

FLUID DATA	1	Tag Number		FE-401	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		10	
	6	Normal Flow (MMSCFD)		4	
	7	Min Flow (MMSCFD)		2	
	8	Pressure PSIG		1000-1630	
	9	Temperature ^{0} F		100-140	
	10	Specific Gravity		0.7-0.8	
	11	Comp. Factor Z		0.8422	
	12	CP/CV		1.617	
	13	Op. Viscosity Up Stream cP		0.01648	
	14	Base Press (psia)	Base Temp ^{0} F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		100" W.C	
	20	Beta = d/D		0.43	
	21	Orifice Bore Diameter		1.371"	
	22	Line I.D		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

Rev.	Date	Description	Prepared	Checked	Approved
A	1/6/2018	Issued For Construction	RK	NWS	AJ
0	1/7/2017	Issued For Review	RK	NWS	AJ

CLIENT	DEVELOPMENT OF SULEMAN-2 WELLHEAD		CONSULTANT
	DOC. TITLE	FLOW ELEMENT (ORIFICE PLATE)	
	DOC. NO.	2733-PDS-005	REV. A

FLUID DATA	1	Tag Number		FE-001	
	2	Service		WELL HEAD FLOW LINE	
	3	Line Size		4"	
	4	Fluid State		GAS & LIQUID	
	5	Max. Flow (MMSCFD)		23	
	6	Normal Flow (MMSCFD)		15	
	7	Min Flow (MMSCFD)		10	
	8	Pressure PSIG		1000-1620	
	9	Temperature ^{O} F		70-130	
	10	Specific Gravity		0.7-0.8	
	11	Comp. Factor Z		0.8251	
	12	CP/CV		1.627	
	13	Op. Viscosity Up Stream cP		0.01626	
	14	Base Press (psia)	Base Temp ^{0} F	14.7	60
	15	Design Pressure PSIG		1700	
	17	Diff. Range		100" W.C	
	20	Beta = d/D		0.58	
	21	Orifice Bore Diameter		2.325*	
	22	Line I.D		3.624 "	
	23	Flange Rating		900#	
	24	Vent or Drain Hole		YES	
	25	Plate Thickness		Note-4	
	26	Pipe Schedule		120	
	27	Concentric/Other		Concentric	
	28	Sq.Edged / Other		Sq. Edge	
	29	Flange Taps / Other		Flange Taps	
	30	Flange R.F / Other		RTJ	
	31	Flange Type W.N/ Other		W.N	
	32	Material		UNS S31803	

NOTES :

1	All Materials Shall Comply With NACE M.R.O175 (1991).
2	Entrained Liquid And Possibility Of Unknown Sand Content.
3	Stellite Coating Required.
4	Thickness calculation to be in accordance with BS 1042 PT 1.5
5	The Supplier should have last five years experience of similar works.

Rev.	Date	Description	Prepared	Checked	Approved
A	1/6/2018	Issued For Construction	SOA	RK	AJ
0	1/7/2017	Issued For Review	RK	NWS	AJ