


# Basic Engineering Study for Aung Sinkha Development Project Phase 1A



## DATASHEET FOR PIPELINE FLANGES


	PTT Exploration and Production Public Company Limited Aung Sinkha Development Project Phase 1A Basic Engineering
<input checked="" type="checkbox"/> 1. APPROVED  <input type="checkbox"/> 2. APPROVED with comments (Proceed to IFB)  <input type="checkbox"/> 3. Review with comments  <input type="checkbox"/> 4. Rejected to be reissued  <input type="checkbox"/> 5. Not APPROVED	
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Signed:	

C1	02-Feb-23	CP	Issued for Bid (VE)	JK	CJ	SD	SA
A1	10-Jan-23	THS	Issued for Review (VE)	JK	CJ	SD	SA
REV	DATE	BY	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				ENGINEERING APPROVAL		COMPANY APPROVAL	

REVISION CODE : A = Issued for Review – B = Issued for Approval – C = Issued for Bid

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	<b>PTTEP INTERNATIONAL LIMITED</b>		
	Basic Engineering Study for Aung Sinkha Development Project Phase 1A		
	MM-ASK-1A-APL02-PLR-DTS-0003	REV C1	

DOCUMENT TITLE	DATASHEET FOR PIPELINE FLANGES Rev.A1		PTTEPI DOC. NO.	MM-ASK-1A-APL02-PLR-DTS-0003 Rev.A1	
<b>Aung Sinkha Development Project PROJECT: Review Comment</b>			<b>PTTEPI RETURN STATUS</b>	<b>Aung Sinkha Development Project PROJECT</b>	
PTTEPI		T.EN			
Date issued:	23-Jan-2023	Date Received:			
Issued by:	surasitd	Action on:			
Approval by:	sarana	Approval by:			
<i>Reviewed with Comment</i>					
<b>DO NOT DELETE OTHER REVIEWERS COMMENTS WITHOUT DISCUSSING WITH THEM!</b>					
COMMENT NO.	SECT.	PAGE & REF.	CLIENT COMMENTS (REVIEWER)	T.EN RESPONSE	COMMENT STATUS OPEN/CLOSED
1		2	All texts/font are not easy to read. So, please check. The Text/Font in MM-ASK-1A-GEN-PLR-DTS-0001 Rev C2 is preferable, can copy it.	Checked. All texts/fonts are the same as your referred documents. However, CTR has increased the text size.	

Comment by*
Surasit Daenrak



DOCUMENT NO. MM-ASK-1A-APL02-PLR-DTS-0003  
 REVISION NO. C1  
 BY CP  
 CHKD JK  
 APPR'D CJ  
 SHEET 2 OF 2

Revision

	PARAMETER	UNIT	VALUE	REMARKS
1	<b>GENERAL DESIGN DATA</b>			
2	FLUID	-	Condensate	
3	SOUR SERVICE (YES / NO)	-	No	
4	SYSTEM DESCRIPTION	-	8.625" APL02 form APF to ACP	
5	FLANGE STEEL GRADE	-	ASTM A694 F65 ASTM A105 for Blind Flange	
6	PRESSURE RATING CLASS	-	#300	
7	DESIGN LIFE	yrs	20	
8	DESIGN CODE	-	10008-STD-6-PLR-009 and ASME BPVC SECTION VIII, DIV.2.	
9	MAXIMUM EXTERNAL BENDING LOAD	kN.m	Note 9	
10	MAXIMUM EXTERNAL FORCE LOAD	kN	Note 9	
11	DESIGN TEMPERATURE (MIN / MAX)	°C	0/70	
12	MAXIMUM OPERATING TEMPERATURE	°C	44.1	
13	DESIGN PRESSURE	barg	48.7	
14	MAXIMUM OPERATING PRESSURE	barg	10.4	
15	INTERNAL CORROSION ALLOWANCE	mm	3	
16	DESIGN / SAFETY FACTOR	-	0.72	
17	FLANGE MILL HYDROTEST PRESSURE	barg	260.3	90% SMYS of the Matching Pipe
18	<b>STANDARD OF DESIGN</b>			
19	STANDARD OF DIMENSION	-	ASME B16.5	
20	CERTIFICATE	-	EN 10204 Type 3.2	
21	FLANGE NOMINAL INTERNAL DIAMETER (BORE)	mm	205.02	
22	RING MECHANICAL CHARACTERISTICS	-	Soft Iron (ASME B16.20 and MSS SP-44)	
23	FLANGE FACING (e.g. raised face)	-	Ring Type Joint	
24	TYPE OF RING GASKET	-	R-49	
25	THE MINIMUM YIELD STRENGTH IN THE RING SECTION	MPa	450	
26	<b>MATCHING PIPE</b>			
27	STEEL GRADE (API 5L/ISO 3183)	-	API 5L X65	
28	NOMINAL INTERNAL DIAMETER (BORE)	mm	219.1	
29	NOMINAL WALL THICKNESS	mm	7.04	
30	MAXIMUM FIELD HYDROSTATIC TEST PRESSURE	barg	60.9	
31	<b>CHARPY V IMPACT TEST</b>			
32	TEST TEMPERATURE	°C	-10	
33	ABSORBED ENERGY (Min. Average)	J	54	
34	ABSORBED ENERGY (Min. Single)	J	40	
35	<b>H<sub>2</sub>S CORROSION TEST</b>			
36	HIC AND SSC TEST (YES / NO)	-	No	
37	<b>HARDNESS TEST</b>			
38	MAXIMUM HARDNESS	-	Max. 250 HV10	
39	<b>BOLT AND NUT</b>			
40	BOLT MATERIAL	-	ASTM A193 Grade B7M with Cut Threads and 22HRC max	
41	NUT MATERIAL	-	ASTM A194 Grade 2HM with 22HRC max.	
42	<b>COATING</b>			
43	FLANGE COATING	-	System S08 as per 10008-STD-6-COR-010	
44	BOLT AND NUT COATING	-	Zinc Plating and Xylan Coated	
45	<b>NOTES:</b>			
46	1. The quantity of flanges are shown in Doc. No. MM-ASK-1A-APL02-PLR-MTO-0001.			
47	2. Flange face finishing shall be in accordance with ASME B16.5.			
48	3. The flange shall have beveled ends in accordance with MSS SP-44, except that root face shall be 1.6mm ±0.6mm.			
49	4. Flange shall be provided with weld three (3) test rings with minimum length of 300mm or as specified/quantified in the purchase order for welding qualifications. test rings shall be from the same heat of steel source, flange size and material grade. test rings shall be supplied as pipe with wall thickness specified in the purchase order and to match with the representative flange end.			
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52	5. The nominal internal diameter (bore) shall be matched with pipeline/fitting as defined in project documents. the minimum wall thickness at weld neck shall not be less than the matching pipeline/fitting.			
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54	6. All flanges for pipeline shall be capable of withstanding combinations of internal and external bending moments. the moments and forces are based on maximum loadings on the flange connection for this project.			
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56	7. Stud bolts & nuts shall be cleaned (washed and degreased), abrasive and painted as per Specification 10008-STD-6-COR-010. The bolts provided shall allow for use of hydraulic tightening system (hydra-tight or equivalent). The nuts shall be provided with Tommy Bar holes.			
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58	8. Blind flange for hydrotest shall be supplied with a 1"1/2 valve and plug, suitable for hydrotest. Blind flanges will be forged items. Blind flanges and gaskets shall comply with ASME B16.5 and B16.20.			
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60	9. The maximum external load on flanges shall be confirmed by EPCI Contractor in detailed engineering design.			
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