Basic Engineering Study for
Aung Sinkha Development Project Phase 1A

DATASHEET
FOR
PIPELINE FLANGES

PTTEP

PTT Exploration and Production Public Company Limited
Aung Sinkha Development Project Phase 1A
Basic Engineering

- [x] 1. APPROVED
- [ ] 2. APPROVED with comments (Proceed to IFB)
- [ ] 3. Review with comments
- [ ] 4. Rejected to be reissued
- [ ] 5. Not APPROVED

COMPANY's APPROVAL shall not relieve CONTRACTOR from his obligation under the CONTRACT. COMPANY's failure not to comment or only partially comment any CONTRACT DOCUMENT shall not be construed as an acceptance of the content of the documents.

Signed: Digitally signed by zWinaiE

REV	DATE	BY	DESCRIPTION	ENGINEERING APPROVAL CHECK	ENGINEERING APPROVAL APPR.	COMPANY APPROVAL CHECK	COMPANY APPROVAL APPR.
C2	21-Jun-24	AH	Issued for Bid	RS	AH	WE	SA
C1	24-May-24	AH	Issued for Bid	RS	AH	WE	SA
A1	16-Feb-24	AH	Issued for Review	RS	AH	WE	SA

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

DOCUMENT TITLE	DATASHEET FOR PIPELINE FLANGES Rev.C1	PTTEP DOC. NO.	MM-ASK-1A-APL03-PLR-DTS-0003 Rev.C1

Aung Sinkha Development Project PROJECT: Review Comment			
PTTEP		**GCME**	
Date issued:	14-Jun-2024	**Date Received:**	21-06-24
Issued by:	zwinaie	**Action on:**	AH
Approval by:	sarana	**Approval by:**	AH

PTTEP RETURN STATUS

Approved with Comment

Aung Sinkha Development Project PROJECT

DO NOT DELETE OTHER REVIEWERS COMMENTS WITHOUT DISCUSSING WITH THEM!

COMMENT NO.	SECT.	PAGE & REF.	CLIENT COMMENTS (REVIEWER)	GCME RESPONSE	COMMENT STATUS OPEN/CLOSED	Comment by*
1		3	APL03	Accepted	CLOSE	Winai Emseedaeng

	PTTEP GCME	DOCUMENT NO. MM-ASK-1A-APL03-PLR-DTS-0003 REVISION NO. C2 BY AH CHKD RS APPR'D AH SHEET 2 OF 2			Revision
	PARAMETER	UNIT	VALUE	REMARKS	
1	**GENERAL DESIGN DATA**				
2	FLUID	-	DRY NATURAL GAS		
3	SOUR SERVICE (YES / NO)	-	No		
4	SYSTEM DESCRIPTION	-	12" APL03 form APF to AMS01 (12.75" OD)		C2
5	FLANGE STEEL GRADE	-	ASTM A694 F65 ASTM A105 for Blind Flange		
6	PRESSURE RATING CLASS	-	#900		
7	DESIGN LIFE (OPERATIONAL)	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	-10 / 70		
12	NORMAL OPERATING TEMPERATURE	°C	Ambient - 50		
13	DESIGN PRESSURE	barg	153.2		
14	MAXIMUM OPERATING PRESSURE	barg	85		
15	INTERNAL CORROSION ALLOWANCE	mm	3		
16	DESIGN / SAFETY FACTOR	-	0.5		
17	FLANGE MILL HYDROTEST PRESSURE	-	90% SMYS		
18	**STANDARD OF DESIGN**				
19	STANDARD OF DIMENSION	-	ASME B16.5		
20	CERTIFICATE	-	EN 10204 Type 3.2		
21	FLANGE NOMINAL INTERNAL DIAMETER (BORE)	mm	292.10		
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	**MATCHING PIPE**				
27	STEEL GRADE (API 5L/ISO 3183)	-	API 5L X65		
28	NOMINAL INTERNAL DIAMETER (BORE)	mm	292.10		
29	NOMINAL WALL THICKNESS	mm	15.9		C2
30	MAXIMUM FIELD HYDROSTATIC TEST PRESSURE	barg	229.8		
31	**CHARPY V IMPACT TEST**				
32	TEST TEMPERATURE	°C	-10		
33	ABSORBED ENERGY (Min. Average)	J	54		
34	ABSORBED ENERGY (Min. Single)	J	40		
35	**H_2S CORROSION TEST**				
36	HIC AND SSC TEST (YES / NO)	-	No		
37	**HARDNESS TEST**				
38	MAXIMUM HARDNESS	-	Max. 250 HV10		
39	**BOLT AND NUT**				
40	BOLT MATERIAL	-	ASTM A193 Grade B7M with Cut Threats and 22HRC max		
41	NUT MATERIAL	-	ASTM A194 Grade 2HM with 22HRC max.		
42	**COATING**				
43	FLANGE COATING	-	System S08 as per 10008-STD-6-COR-010		
44	BOLT AND NUT COATING	-	Zinc Plating and Xylan Coated		

45 **NOTES:**

46 1. The quantity of flanges are shown in Doc. No. MM-ASK-1A-APL03-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.
50 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
51 the purchase order and to match with the representative flange end.

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
53 not be less than the matching pipeline/fitting.

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
55 the flange connection for this project.

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
57 hydraulic tightening system (hydra-tight or equivalent). The nuts shall be provided with Tommy Bar holes.

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.
59 Blind flanges and gaskets shall comply with ASME B16.5 and B16.20.

60 9. The maximum external load on flanges shall be confirmed by EPCI Contractor in detailed engineering design.

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