


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



## DATASHEET FOR SCREW ANCHORS

	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: _____	


REV.	DATE	BY	DESCRIPTION	CHECK	APPR.	CHECK	APPR.
				ENGINEERING APPROVAL		COMPANY APPROVAL	
		<i>AH</i>				<i>AH</i>	
C1	23-May-24	AH	Issued for Bid	RS	AH	WE	SA
A1	17-Feb-24	AH	Issued for Review	RS	AH	WE	SA

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-APL03-PLR-DTS-0007	REV. C1	

DOCUMENT TITLE	DATASHEET FOR SCREW ANCHORS Rev.A1	PTTEP DOC. NO.	MM-ASK-1A-APL03-PLR-DTS-0007 Rev.A1
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<b>Aung Sinkha Development Project PROJECT: Review Commen</b>		PTTEP RETURN STATUS  Reviewed with Comment	Aung Sinkha Development Project PROJECT		
PTTEP			GCME		
Date issued:	07-Mar-2024		Date Received:	23-05-24	
Issued by:	zwinale		Action on:	AH	
Approval by:	sarana	Approval by:	AH		

DO NOT DELETE OTHER REVIEWERS COMMENTS WITHOUT DISCUSSING WITH THEM

COMMENT NO.	SECT.	PAGE & REF.	CLIENT COMMENTS (REVIEWER)	GCME RESPONSE	COMMENT STATUS OPEN/CLOSED
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			No Comment	No comment was given, however the following updates were performed; 1) Updated pipeline parameters (pressure / temps) 2) Added pipeline class (PL2) 3) Included pipeline design life (20 years operational) 4) Updated quantity based on final Alignment sheet 5) Pull test requirements	
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Comment by\*



DOCUMENT NO. MM-ASK-1A-APL03-PLR-DTS-0007  
 REVISION NO. C1  
 BY AH  
 CHKD RS  
 APPR'D AH  
 SHEET 2 OF 2

Revision

	PARAMETER	UNIT	VALUE
1	<b>GENERAL</b>		
2	NOMINAL PIPE SIZE	-	NPS 12 (12.75 inch)
3	DWG NO.	-	MM-ASK-1A-APL01-PLR-DWG-0013
4	PIPING CLASS / PRESSURE RATING	-	PL2 / #900
5	SERVICE	-	Dry Natural Gas
6	ENVIRONMENT	-	Onshore Buried Pipeline
7	DESIGN TEMPERATURE (MIN. / MAX.)	°C	-10 to 70
8	DESIGN PRESSURE	barg	153.2
9	OPERATING TEMPERATURE (MIN. / MAX.)	°C	Ambient to 50
10	OPERATING PRESSURE (MIN. / MAX.)	barg	40 / 85
11	LINE PIPE CORROSION ALLOWANCE	mm	3
12	DESIGN LIFE (OPERATION)	Year	20
13	<b>SCREW ANCHOR</b>		
14	TYPE	-	Double Helix Screw Anchor
15	INSTALLED TYPE	-	Underground
16	SAFETY FACTOR FOR SCREW ANCHOR COMPONENT	-	2
17	ANCHOR SHAFT SIZE AND MATERIAL	-	1 ½" x1 ½" ASTM A322 Grade 1335 (modified)
18	HELIX SIZE AND MATERIAL	-	VTA (min 12 inch) / ASTM A36
19	ANCHOR EXTENSION SHAFT SIZE AND MATERIAL	-	1 ½" x1 ½" ASTM A322 Grade 1335 (modified)
20	COUPLING MATERIAL	-	ASTM A148 grade 105-85 or S50C
21	POLYESTER SADDLE	-	VTA
22	PROTECTIVE COATING	-	None
23	CATHODIC PROTECTION BOLTED TO ANCHOR SHAFT	-	Sacrificial Zinc Anode Bolted to Each Anchor Shaft
24	SACRIFICIAL ZINC ANODE SIZE (MINIMUM OF EACH SIDE)	kg	VTA (Note 1)
25			
26	<b>INSTALLATION DETAILS</b>		
27	MINIMUM Screw Anchor Spacing	m	3x Helix dia. (measured shaft-to-shaft)
28	MINIMUM HOLD-DOWN LOAD /PAIR	kN	178 (40,000lb)
29	MINIMUM INSTALLATION TORQUE	kN*m	VTA
30	MAXIMUM ALLOWABLE DEFLECTION OF PIPELINE	mm	200
31	WATER DENSITY	kg/m <sup>3</sup>	1,000
32	WEIGHT	kg	VTA
33	QUANTITY	items	36 (NOTE 2)
34			
35	<b>INSPECTION &amp; TESTING</b>		
36	PULL TEST		10% of Installed Screw Anchors
37	PULL TEST LOAD		115% of Design Screw Anchor Load (one side only)
38			
39			
40	<b>NOTES:</b>		
41	1. Sacrificial anode size will be confirmed by Vendor with supporting calculation based on 20 year operational design life incl. anchor extensions.		
42	2. Screw anchor quantity shall be reconfirmed during detailed design phase)		
43			
44			
45			