


Basic Engineering Study for Aung Sinkha Development Project Phase 1A



DATASHEET FOR SCREW ANCHORS

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|  | 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) |
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|------|-----------|----|-------------------|----------------------|-------|------------------|-------|
| | | | | ENGINEERING APPROVAL | | COMPANY APPROVAL | |
| C1 | 26-Jan-22 | JK | Issued for Bid | AN | CJ | WE | SA |
| A1 | 22-Dec-21 | JK | Issued for Review | AN | CJ | WE | SA |

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

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|  | PTTEP INTERNATIONAL LIMITED | |  |
| | Basic Engineering Study for Aung Sinkha Development Project Phase 1A | | |
| | MM-ASK-1A-APL01-PLR-DTS-0003 | REV. C1 | |

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|---|-------------|----------------|----------|-----------------------------|--|--|--|
| Aung Sinkha Development Project PROJECT: Review Commen | | | | PTTEPI RETURN STATUS | | Aung Sinkha Development Project PROJECT | |
| PTTEPI | | TET | | Approved with Comment | |   | |
| Date issued: | 10-Jan-2022 | Date Received: | 11/01/22 | | | | |
| Issued by: | zwinaiE | Action on: | 11/01/22 | | | | |
| Approval by: | sarana | Approval by: | Sumate | | | | |

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| COMMENT NO. | SECT. | PAGE & REF. | CLIENT COMMENTS (REVIEWER) | TET RESPONSE | COMMENT STATUS OPEN/CLOSED |
|-------------|-------|-------------|----------------------------|--------------|-------------------------------|
| 1 | | 2 | Update Hold List. | Incorporated | |
| 2 | | 2 | Remove hold | Incorporated | |

| Comment by* |
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 SHEET 2 OF 2

Revision

| | PARAMETER | UNIT | VALUE |
|----|---|-------------------|--|
| 1 | GENERAL | | |
| 2 | NOMINAL PIPE SIZE | - | NPS20 |
| 3 | DWG NO. | - | MM-ASK-1A-APL01-PLR-DWG-0013 |
| 4 | PIPING CLASS | - | #600 |
| 5 | SERVICE | - | Multiphase / Severe Sour Service |
| 6 | ENVIRONMENT | - | Onshore Buried Pipeline |
| 7 | DESIGN TEMPERATURE (MIN. / MAX.) | °C | -10 / 75 |
| 8 | DESIGN PRESSURE | barg | 70 |
| 9 | OPERATING TEMPERATURE (MIN. / MAX.) | °C | 22.7 / 33 |
| 10 | OPERATING PRESSURE (MIN. / MAX.) | barg | 25 |
| 11 | CORROSION/ EROSION ALLOWANCE | mm | 5.6 |
| 12 | | | |
| 13 | SCREW ANCHOR | | |
| 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 A148 grade 105-85 |
| 18 | HELIX SIZE AND MATERIAL | - | VTA |
| 19 | ANCHOR EXTENSION SHAFT SIZE AND MATERIAL | - | 1 ½" x1 ½" ASTM A148 grade 105-85 |
| 20 | COUPLING MATERIAL | - | ASTM A148 grade 105-85 |
| 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 | INSTALLATION DETAILS | | |
| 27 | MAXIMUM SCREW ANCHOR SPACING | m | 36 |
| 28 | MINIMUM HOLD-DOWN LOAD /PAIR | kN | 177.9 |
| 29 | MINIMUM INSTALLATION TORQUE | kN*m | VTA |
| 30 | MAXIMUM ALLOWABLE DEFLECTION OF PIPELINE | mm | 200 |
| 31 | LIQUEFIED SOIL DENSITY | kg/m ³ | 1,400 |
| 32 | WEIGHT | kg | VTA |
| 33 | QUANTITY | items | (Note 2) |
| 34 | | | |
| 35 | INSPECTION & TESTING | | |
| 36 | PULL TEST | | 10% of Installed Screw Anchors |
| 37 | PULL TEST LOAD | | 115% of Design Screw Anchor Load (one side only) |
| 38 | | | |
| 39 | | | |
| 40 | NOTES: | | |
| 41 | 1. Zinc anode size will be confirmed by Vendor with supporting calculation. | | |
| 42 | 2. Screw anchor quantity shall be as per MM-ASK-1A-APL01-PLR-MTO-0001. | | |
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| 45 | HOLDS: | | |
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