

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

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ULTRASONIC FLAW DETECTION & MAGNETIC PARTICLE INSPECTION CERTIFICATE OF X-OVER

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|--|--|-------------------------------|---|
| Client Name: | ZHONGMAN PETROLEUM ENGINEERING TECHNOLOGY(HONG KONG) CO LIMITED IRAQ | Report No.: | ZPEC-16-QC-24-08-RS-022 |
| Acceptance Creater: | DS-1 Fifth Edition, Volume 3 CAT 5-3 | Date of Inspection: | 07.AUG.2024 |
| Work Location: | PO-64 | RIG NAME: | ZPEC-16 |
| TEST EQUIPMENT & CONSUMABLE DETAILS | | | |
| EQ. Manufacturer/ Model: | Sonatest/ D-50 | EQ. Serial No: | I017374 |
| Calibration Due Date: | 15.OCT.2024 | Couplant: | UT Gel |
| Calibration Block Type: | V1 (SR # 506233) | Calibration Due Date: | 15.OCT.2024 |
| Transducer Angle: | 90 DEG, 60 DEG, 45 DEG | Transducer Frequency: | 4 MHz/ SR. 13737 |
| Range: | 100 mm | Reference dB: | 42 dB |
| Area Scanned: | Connections | Material Velocity: | 3250 m/s, 5900 m/s |
| White Contrast WCP-2 | Batch #: 220602 Manufacture: Magnaflux Exp Date: JUN,2025 | Technical Details | Wet Visible Continuous |
| Black Ink 7HF | Batch#:220605 Manufacture: Magnaflux Exp Date: JULY.2025 | Coil 1200 Amp-Turns/in | SC 22713 Cal.15.FEB.2024 Cal Due14.AUG.2024 |
| Fluorescent 14HF | Batch #: 220306 Manufacture: Magnaflux Exp Date: March.2025 | A.C Hand Yoke | 201504053 Cal.15.FEB.2024 Cal Due14.AUG.2024 |
| Intensity Meter | SR#1608000134 CAL.Date Cal. 15.FEB.2024 Cal Due 14.AUG.2024 | UV Black Light | SR#1900084 Cal.15.FEB.2024 Cal Due14.AUG.2024 |
| LEAD GAGE | SR#AH07KF0027 GAEMAKER LG-5003 Cal. 13.FEB.2024 Cal Due 12.AUG.2024 | THREAD PROFILE GAGE | SR#21336 Cal. 13.FEB.2024 Cal Due 12.AUG.2024 SR#21335 Cal. 15.FEB.2024 Cal Due 14.AUG.2024 |
| Magnetic Particle Fluorescent 14HF Concentration: | 0.1 To 0.4 ML / 100 ML | WMPT Light Intensity: | 3500 LUX |
| Methodology: | <ul style="list-style-type: none"> Through Visual inspection Dimensional 3 UltraSonic Flaw Detection MPI inspection with Ultraviolet Light | | |

| Serial No. | Description | Connection | | Result Inspection | | | Dimensional-3 Inspection | | | | | | | | | | | | | | |
|---------------------|-------------|--|------------|-------------------|------|------|--------------------------|--------|-----------|-----------|-----------|-------------|--------|----------|----------|-----------|-----------|-------------|------------------|---------------|---------------|
| | | Pin | Box | Pin | Box | Body | Pin | | | | | Box | | | | | Body | | | | |
| | | | | | | | OD(In) | ID(In) | SRG φ(In) | SRG ∅(In) | Pin λ(In) | Bevel φ(In) | OD(In) | CB φ(In) | CB δ(In) | BBD φ(In) | BBL δ(In) | Bevel φ(In) | Tongspac e (In)λ | Box Lth (In)λ | Overall λ(In) |
| MJS2302516 | X-OVER | 7 5/8" Reg | 6 5/8" Reg | Acc. | Acc. | Acc. | 9 1/2" | 2 7/8" | 6 3/8" | 7/8" | 5 3/16" | 8 13/16" | 8" | 6 1/16" | 5/8" | 5 18/64" | 8 3/4" | 7 3/4" | - | - | 36 1/2" |
| Conclusion : | | *01 X-Over above was found "Acceptable". At the time of Inspection (Ready for Use). | | | | | | | | | | | | | | | | | | | |

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|-----------------------------------|-------------------------------|---------------------------------|-------------------------|--------------------------|--------------------------|
| OD Outside Diameter | ID Inside Diameter | SRG Stress Relief Groove | CB Counter Bore | BB Bore Back | FB Float Bore |
| φ Diameter | λ Length | ∅ Width | δ Depth | NP Not Present | NA Not Applicable |
| EGR Elevator Groove Recess | SGR Slip Groove Recess | CR Crack | B Bent | PC Premium Class | RF Reface |
| GT Galled Thread | TP Thread Pitting | SP Seal Pitting | TD Thread Damage | SD Seal Damage | M Mashed |
| 1 100 % Coating | 2 99-71 % Coating | 3 70-40 % Coating | 4 Up to 40 % | 5 Nil | WT Wall Thickness |
| Colors Code: | White No Defects | Red Crack or Extreme | Blue Damage | Green Seal Damage | Yellow ACFM |

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|-------------------------|-------------------------|--------------------------|---------|---|----------------------------|
| Inspector Name: | RAO SOHAIL | Review By | | | |
| Qualification: | ASNT Level II NDT, PMNT | Senior Inspector: | M.USMAN | Supervisor: | M.SARWAR |
| Signature: | | | | | Customer Name: |
| | | | | | Customer Signature: |
| Original - Client Files | | Copy - Area Office | | QC/FN/DJ-PB/029 Rev.00 dated 07.Nov2021 | |

