

# AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

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## INSPECTION CERTIFICATE FOR X-OVER#XO-111

|                                                 |                                                                                                                                                            |                              |                                                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Client Name:</b>                             | <b>HALLIBURTON (TSS)</b>                                                                                                                                   | <b>Report No.:</b>           | HAL-24-08-RS-DST-005                                                                                         |
| <b>Acceptance criteria:</b>                     | DS-1 Volume 4 Fifth Edition & API 5CT                                                                                                                      | <b>Date of Inspection:</b>   | 02.AUG.2024                                                                                                  |
| <b>Refrance Standard TSS</b>                    | ST-GL-HAL-TT-510 REV NO 5.1                                                                                                                                | <b>Next Inspection Date:</b> | 01.FEB.2025                                                                                                  |
| <b>TEST EQUIPMENT &amp; CONSUMABLE DETAILS</b>  |                                                                                                                                                            |                              |                                                                                                              |
| WHITE CONTRAST WCP-2                            | Batch #: 220602 Manufacture: Magnaflux<br>Exp Date: JUN.2025                                                                                               | TECHNICAL DETAILS            | Wet Visible Continuous                                                                                       |
| BLACK INK 7HF                                   | Batch#: 220605 Manufacture: Magnaflux<br>Exp Date: JULY.2025                                                                                               | COIL(1200 AMP-TURNS/IN       | SR#22650 Cal.16.APR.2024<br>Cal Due 15.OCT.2024                                                              |
| FLUORESCENT 14HF                                | Batch #: 220306 Manufacture: Magnaflux<br>Exp Date: March.2025                                                                                             | A.C HAND YOKE                | SR#201504052 Cal.15.APR.2024<br>Cal Due 14.OCT.2024                                                          |
| INTENSITY METER                                 | SR#R.043943 Cal.17.APR.2024<br>Cal Due 16.OCT.2024                                                                                                         | UV BLACK LIGHT               | SR#1898977 Cal.15.APR.2024<br>Cal Due 14.OCT.2024                                                            |
| LEAD GAGE                                       | SR#AH07KF0027 GAEMAKER LG-5003<br>Cal.17.APR.2024<br>Cal Due 16.OCT.2024                                                                                   | THREAD PROFILE GAGE          | SR#21336 CAL.Date.17.APR.2024<br>Cal Due 16.OCT.2024<br>SR#21335 CAL.Date.17.APR.2024<br>Cal Due 16.OCT.2024 |
| Magnetic Partical Concentration 7 HF            | 1.2 TO 2.4 ML/100 ML                                                                                                                                       | UV LIGHT INTENSITY:          | 3080 $\mu\text{w}/\text{cm}^2$                                                                               |
| Magnetic particle concentration flourcent 14 HF | 0.1 TO 0.4 ML/100 ML                                                                                                                                       | WMPT Light Intensity:        | 3630 Lux                                                                                                     |
| <b>MAGNITISUM DIRECTION (LONGITUDENAL)</b>      |                                                                                                                                                            |                              |                                                                                                              |
| <b>METHODOLOGY:</b>                             | <ul style="list-style-type: none"> <li>Through Visual inspection</li> <li>Dimensional Inspection</li> <li>MPI inspection with Ultraviolet light</li> </ul> |                              |                                                                                                              |

| Serial No. | Description | Connection |            | Result Inspection |      |      | Dimensional Inspection |        |                    |                    |                   |        |                |                  |                |                  |                   |                      |                      |                        |
|------------|-------------|------------|------------|-------------------|------|------|------------------------|--------|--------------------|--------------------|-------------------|--------|----------------|------------------|----------------|------------------|-------------------|----------------------|----------------------|------------------------|
|            |             | Pin        | Box        | Pin               | Box  | Body | Pin                    |        |                    |                    |                   | Box    |                |                  |                |                  | Body              |                      |                      |                        |
|            |             |            |            |                   |      |      | OD(In)                 | ID(In) | Neck $\varpi$ (In) | Pin $\lambda$ (In) | Bevel $\phi$ (In) | OD(In) | CB $\phi$ (In) | CB $\delta$ (In) | BB $\phi$ (In) | BB $\delta$ (In) | Bevel $\phi$ (In) | Pin T $\lambda$ (In) | Box T $\lambda$ (In) | Overall $\lambda$ (In) |
| XO-111     | X-OVER      | 3 7/8 CAS  | 3 1/2"PH-6 | Acc.              | Acc. | Acc. | 5"                     | 2 1/4" | -                  | -                  | -                 | 5"     | -              | -                | -              | -                | -                 | -                    | -                    | 19 5/8"                |



|                    |                                                                        |
|--------------------|------------------------------------------------------------------------|
| <b>Conclusion:</b> | 01 X-OVER was found "Acceptable". At time of Inspection Ready For Use. |
|--------------------|------------------------------------------------------------------------|

|              |                        |        |                    |        |                          |        |               |       |               |        |                |
|--------------|------------------------|--------|--------------------|--------|--------------------------|--------|---------------|-------|---------------|--------|----------------|
| OD           | Outside Diameter       | ID     | Inside Diameter    | SRG    | Stress Relief Groove     | CB     | Counter Bore  | BB    | Bore Back     | FB     | Float Bore     |
| $\phi$       | Diameter               | $\phi$ | Length             | $\phi$ | Width                    | $\phi$ | 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 Damage. | Blue   | Damage        | Green | Seal Damage   | Yellow | ACFM           |

|                         |                         |                          |                |                    |          |                            |  |
|-------------------------|-------------------------|--------------------------|----------------|--------------------|----------|----------------------------|--|
| <b>Inspector Name:</b>  | M Shahzad Ahn           | <b>Review By</b>         |                |                    |          | <b>Customer Name:</b>      |  |
| <b>Qualification:</b>   | ASNT Level II<br>MPI PT | <b>Senior Inspector:</b> | Naveed Hussain | <b>Supervisor:</b> | Hani Ali | <b>Customer Signature:</b> |  |
| <b>Signature:</b>       |                         |                          |                |                    |          |                            |  |
| Original - Client Files |                         | Copy - Area Office       |                | QC/FN/DJ-PB/029    |          | Rev.00 dated 07.Nov2021    |  |

