

# AI TAKAMUL COMPANY FOR ENGINEERING TEST AND PROFESSIONAL SAFETY LIMITED

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## INSPECTION CERTIFICATE FOR X-OVER

|                                                 |                                                                                                             |                        |                                                                                                              |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------|
| Client Name:                                    | <b>HALLIBURTON (TSS)</b>                                                                                    | Report No.:            | HAL-24-06-MS-TSS-002                                                                                         |
| Acceptance criteria.                            | DS-1 Volume 4 Fifth Edition & API 5CT                                                                       | Date of Inspection:    | 25.JUNE.2024                                                                                                 |
| Refrance Standard TSS                           | ST-GL-HAL-TT-510 REV NO 5.1                                                                                 | Next Inspection Date:  | <b>24-DEC-2024</b>                                                                                           |
| TEST EQUIPMENT & CONSUMABLE DETAILS             |                                                                                                             |                        |                                                                                                              |
| 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:    | 2938 $\mu\text{w}/\text{cm}^2$                                                                               |
| Magnetic particle concentration flourcent 14 HF | 0.1 TO 0.4 ML/100 ML                                                                                        | WMPT Light Intensity:  | 3620 Lux                                                                                                     |
| MAGNITISUM DIRECTION (LONGITUDENAL)             |                                                                                                             |                        |                                                                                                              |
| METHODOLOGY:                                    | <ul style="list-style-type: none"> <li>Through Visual inspection</li> <li>Dimensional Inspection</li> </ul> |                        |                                                                                                              |
|                                                 | •MPI inspection with Ultraviolet light                                                                      |                        |                                                                                                              |

| Serial No. | Description | Connection |           | Result Inspection |      |      | Dimensional Inspection |          |                    |                    |                   |        |          |                    |                    |                   |                      |                      |                        |
|------------|-------------|------------|-----------|-------------------|------|------|------------------------|----------|--------------------|--------------------|-------------------|--------|----------|--------------------|--------------------|-------------------|----------------------|----------------------|------------------------|
|            |             | Pin        | Pin       | Pin               | Pin  | Body | Pin                    |          |                    |                    |                   | Pin    |          |                    |                    |                   | Body                 |                      |                        |
|            |             |            |           |                   |      |      | OD(In)                 | ID(In)   | Neck $\varpi$ (In) | Pin $\lambda$ (In) | Bevel $\phi$ (In) | OD(In) | ID(In)   | Neck $\varpi$ (In) | Pin $\lambda$ (In) | Bevel $\phi$ (In) | Pin T $\lambda$ (In) | Box T $\lambda$ (In) | Overall $\lambda$ (In) |
| TSS-117    | X-OVER      | 5 ½ ACME   | 3 1/2 PH6 | Acc.              | Acc. | Acc. | 7 1/2"                 | 2 11/16" | -                  | -                  | 7 7/16"           | 7 1/2" | 2 11/16" | -                  | -                  | 4 1/4"            | -                    | -                    | 27 1/4"                |



**Conclusion:** ■ 01 X-OVER was found "Acceptable". At time of Inspection Ready For Use.

### Abbreviations :

|              |                        |           |                    |          |                         |          |               |       |               |        |                |
|--------------|------------------------|-----------|--------------------|----------|-------------------------|----------|---------------|-------|---------------|--------|----------------|
| OD           | Outside Diameter       | ID        | Inside Diameter    | SRG      | Stress Relief Groove    | CB       | Counter Bore  | BB    | Bore Back     | FB     | Float Bore     |
| $\phi$       | Diameter               | $\lambda$ | Length             | $\varpi$ | Width                   | $\delta$ | 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           |

|                         |                                                                                     |                    |                     |                    |          |                     |  |
|-------------------------|-------------------------------------------------------------------------------------|--------------------|---------------------|--------------------|----------|---------------------|--|
| Inspector Name:         | M.Shahzad Ahmed                                                                     | Review By          |                     |                    |          |                     |  |
| Qualification:          | ASNT Level II<br>(MT, PT, VT)                                                       | Senior Inspector:  | NAVEED HUSSAIN      | Supervisor:        | Hani Ali | Customer Name:      |  |
| Signature:              |  |                    |                     |                    |          | Customer Signature: |  |
| Original - Client Files |                                                                                     | Copy - Area Office | QC/FN/FLS/03 Rev.00 | Dated: 07 Nov 2021 |          |                     |  |

