



### ULTRASONIC FLAW DETECTION & MAGNETIC PARTICLE CERTIFICATE OF 5" HWDP INSPECTION

|                                                   |                                                                                                                                                                                      |                        |                                                                                                      |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------|
| Client Name:                                      | <b>HONGHUA OIL&amp;GAS ENGINEERING SERVICES.</b>                                                                                                                                     | Report No.:            | QC-24-04-UFD-HH-29-003                                                                               |
| Acceptance criteria.                              | DS-1 Fifth Edition, Volume 3 CAT 3-5                                                                                                                                                 | Date of Inspection:    | 30.APRIL.2024                                                                                        |
| Work Location:                                    | RU-615                                                                                                                                                                               | Rig Name:              | HH-29                                                                                                |
| <b>TEST EQUIPMENT &amp; CONSUMABLE DETAILS</b>    |                                                                                                                                                                                      |                        |                                                                                                      |
| 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<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 | SC 22713 Cal.15.FEB.2024<br>Cal Due 14.AUG.2024                                                      |
| Fluorescent 14HF                                  | Batch #: 220306 Manufacture: Magnaflux<br>Exp Date: March.2025                                                                                                                       | A.C Hand Yoke          | 201504053 Cal.15.FEB.2024<br>Cal Due 14.AUG.2024                                                     |
| Intensity Meter                                   | SR#1608000134 CAL.Date Cal. 15.FEB.2024<br>Cal Due 14.AUG.2024                                                                                                                       | UV Black Light         | SR#1900084 Cal.15.FEB.2024<br>Cal Due 14.AUG.2024                                                    |
| LEAD GAGE                                         | SR#AH07KF0027 GAEMAKER LG-5003<br>Cal. 13.FEB.2024<br>Cal Due 12.AUG.2024                                                                                                            | THREAD PROFILE GAGE    | SR#21336 Cal. 13.FEB.2024<br>Cal Due 12.AUG.2024<br>SR#21335 Cal. 15.FEB.2024<br>Cal Due 14.AUG.2024 |
| Magnetic Particle Fluorescent 14HF Concentration: | 0.1 To 0.4 ML / 100 ML                                                                                                                                                               | WMPT Light Intensity:  | 3150 LUX                                                                                             |
| Methodology:                                      | <ul style="list-style-type: none"> <li>Through Visual inspection</li> <li>Dimensional 3</li> <li>UltraSonic Flaw Detection</li> <li>MPI inspection with Ultraviolet Light</li> </ul> |                        |                                                                                                      |
| CONNECTION                                        | NC 50                                                                                                                                                                                | SIZE                   | 5"                                                                                                   |

| Serial No.  | Visual Inspection |            |                                                                                                                                                                         |    | Black Light |     | Dimensional 3 Inspection |         |            |            |              |           |         |           |           |           |           |              |        |                 |                 |                   |  |
|-------------|-------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|-----|--------------------------|---------|------------|------------|--------------|-----------|---------|-----------|-----------|-----------|-----------|--------------|--------|-----------------|-----------------|-------------------|--|
|             |                   |            |                                                                                                                                                                         |    |             |     | Pin                      |         |            |            |              |           | Box     |           |           |           |           |              |        | Body            |                 |                   |  |
|             | Pin               | Box        | Body                                                                                                                                                                    | HB | Pin         | Box | OD (in)                  | ID (in) | SRG ϕ (in) | SRG λ (in) | Bevel ϕ (in) | pinλ (in) | OD (in) | CB ϕ (in) | CB δ (in) | BB ϕ (in) | BB δ (in) | Bevel ϕ (in) | Seal ∅ | Pin Tong λ (in) | Box Tong λ (in) | Center Rod ϕ (in) |  |
| H32790      | S.D               | S.D        | Acc                                                                                                                                                                     | √  | Acc         | Acc | 6 9/16"                  | 3 1/8"  | 4 23/32"   | 15/16"     | 6 1/16"      | 4 7/16"   | 6 9/16" | 5 5/16"   | 5/8"      | 4 5/8"    | 8"        | 6 1/16"      | 14/32" | 19 ½"           | 18 5/8"         | 5 ½"              |  |
| 59P523      | SRG P&T. D        | S.D& C.B.P | Acc                                                                                                                                                                     | √  | Acc         | Acc | 6 ½"                     | 3 1/16" | 4 23/32"   | ¾"         | 6 1/16"      | 4 7/16"   | 6 ½"    | 5 5/16"   | 5/8"      | 4 5/8"    | 8 1/8"    | 6 1/16"      | 14/32" | 18"             | 16 7/16"        | 5 ½"              |  |
|             |                   |            |                                                                                                                                                                         |    |             |     |                          |         |            |            |              |           |         |           |           |           |           |              |        |                 |                 |                   |  |
| Conclusion: |                   |            | The Above Mentioned 5" Heavy Weight Drill Pipe was Found UnAcceptable from Pin Seal&Thread Damage&SRG Pittted Box Connention Seal Damage&Counter Bore Pittted Rejected. |    |             |     |                          |         |            |            |              |           |         |           |           |           |           |              |        |                 |                 |                   |  |

#### Abbreviations :

|              |                        |           |                    |          |                      |          |               |       |               |        |                |
|--------------|------------------------|-----------|--------------------|----------|----------------------|----------|---------------|-------|---------------|--------|----------------|
| OD           | Outside Diameter       | ID        | Inside Diameter    | SRG      | Stress Relief Groove | CB       | Counter Bore  | BB    | Bore Back     | FB     | Float Bore     |
| $\phi$       | Diameter               | $\lambda$ | Length             | $\sigma$ | 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     | Blue     | ACFM          | Green | Field Repair  | Yellow | Damage         |

|                                                                                                   |                   |          |             |       |                     |
|---------------------------------------------------------------------------------------------------|-------------------|----------|-------------|-------|---------------------|
| Inspector Name:                                                                                   | Review By         |          |             |       |                     |
| Qualification:                                                                                    |                   |          |             |       |                     |
| Signature:                                                                                        | Senior Inspector: | M.SHARIF | Supervisor: | WAQAS | Customer Name:      |
|                                                                                                   |                   |          |             |       | Customer Signature: |
| Original - Client Files      Copy - Hq Office      QC/FN/AF,REP/026 Rev.00      Dated 01 AUG 2021 |                   |          |             |       |                     |

