

CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

| | | | |
|---------------------|--|-------------------------|---|
| CLIENT: | HALLIBURTON | REPORT No.: | QC-24-03-TSS-HALL-NDT-076 |
| LOCATION: | TSS WORKSHOP & INSPECTION TEST AREA | JOB NO : | QC-24-03-TSS-NDT-HALL-03 |
| WORK ORDER # | 326362800 | SPECIFICATION: | ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book |
| INSPECTION DATE: | Monday, March 18, 2024 | INSP. DUE DATE: | Monday, March 17, 2025 |
| TYPE OF INSPECTION: | VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING | | |
| DESCRIPTION: | STORAGE TANK DRAIN LINE | SAP NO.: | 13336975 |
| MANUFACTURER: | AL SHIRAWI EQUIPMENT COMPANY LLC | MANUFACTURER SERIAL NO: | 10567-2 |

INSPECTION DETAILS

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTMER

ONLINE TRACEABILITY

(a) Normal condition: Large reflective surface, Small reflective surface, Corroded condition.

Underline: (b) Corrosion present on back surface. Reflection ratio increases with angle by diffuse reflection caused by corroded subsurface.

| ANGLE | THICKNESS AT POSITION | | | | NOMINAL THICKNESS | CORROSION ALLOWANCE | FINAL REMARKS |
|-------|-----------------------|-------|-------|-------|-----------------------|-----------------------|---------------------|
| | 0° | 90° | 180° | 270° | | | |
| A | 0.261 | 0.273 | 0.276 | 0.282 | 8.56 MM 0.337 INCH | 3.18 MM 0.125 INCH | SATISFACTORY |
| B | 0.249 | 0.255 | 0.262 | 0.266 | | | |
| C | 0.259 | 0.263 | 0.283 | 0.287 | | | |
| D | 0.267 | 0.274 | 0.284 | 0.271 | | | |
| E | 0.252 | 0.260 | 0.258 | 0.264 | | | |
| F | 0.265 | 0.268 | 0.254 | 0.258 | | | |
| G | 0.273 | 0.281 | 0.275 | 0.279 | | | |
| H | 0.258 | 0.265 | 0.269 | 0.278 | | | |

INSPECTION RESULT

| | | |
|----------|----------|---|
| VT & MPI | Accepted | * ACCORDING TO ASTM E709(70.94158). |
| UT | Accepted | According to ASTM E797 & ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book |
| BODY | Accepted | *** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book |

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158)
 U.T-The Above Item Was Found Acceptable As Per ASTM E797 & ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

| AC YOKE S.N: | 201504052 | CAL DUE DATE | 12-Aug-24 | White Contrast WCP-2 | MANUFACTURE | BATCH NO | EXPIRE DATE |
|-------------------------------|-----------|--------------|-----------|------------------------------|----------------------|-----------|-------------|
| Digital Lux Meter WHITE LIGHT | 2722003 | CAL DUE DATE | 14-Aug-24 | | Magnaflux | 220602 | JUN,2025 |
| UT THICKNESS GAUGE: | 3997 | CAL DUE DATE | 14-Aug-24 | Black Magnetic Ink 7HF | MANUFACTURE | BATCH NO | EXPIRE DATE |
| UT TEST BLOCK: | NoBo5087 | CAL DUE DATE | 14-Aug-24 | Magnaflux | 220605 | JULY,2025 | |
| ASTM Test Block: | 1657 | CAL DUE DATE | 12-Aug-24 | Fluorescent Magnetic Ink 7HF | 1.2 to 2.4 ml/100 ml | | |
| WHITE LIGHT INTENSITY: | 3630 lux | | | | | | |

PERSON DETAILS

REVIEW BY

| | | | | | |
|--------------------|-----------------|------------------------|----------------|---------|--|
| INSPECTOR NAME: | M.Shahzad Ahmed | SENIOR INSPECTOR: | NAVEED HUSSAIN | CLIENT: | |
| QUALIFICATION: | LEVEL 2 | INSPECTION SUPERVISOR: | HANI ALI | HS&SIGN | |
| SIGNATURE & STAMP: | | | | DATE: | |

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