

CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

| | | | |
|---------------------|--|-----------------------|-------------------------------|
| CLIENT: | HALLIBURTON | REPORT NO.: | QC-24-12-TSS-NDT-125 |
| LOCATION: | TSS YARD | JOB NO: | 10122024 |
| WORK ORDER # | ***** | STANDARD: | ASTM E709 & ASTM E797 |
| DATE OF INSPECTION: | Wednesday, December 11, 2024 | NEXT INSPECTION DATE: | Tuesday, June 10, 2025 |
| TYPE OF INSPECTION: | VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING | | |

| | | | |
|--------------|---------------------------------------|------------|------|
| DESCRIPTION: | CHECK VALVE 3" 600 CL (FLAPPER VALVE) | SERIAL NO: | 1026 |
|--------------|---------------------------------------|------------|------|

(a) Normal condition: Large reflection echo from the target surface. (b) Corrosion present on back surface: Reflection echo becomes wider and smaller due to diffused reflection caused by the corroded surface.

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

ONLINE TRACEABILITY

| POINTS | THICKNESS AT POSITION | | MINIMUM THICKNESS IN INCHES |
|--------|-----------------------|--|-----------------------------|
| | A | | |
| 0° | 0.865 | | 0.400 INCH |
| 90° | 0.878 | | |
| 180° | 0.881 | | |
| 270° | 0.862 | | |

| INSPECTION RESULT | | |
|-------------------|----------|-------------------------|
| VT & MPI | Accepted | According to ASTM E709 |
| UT | Accepted | According to ASTM E 797 |

Inspection Evaluation

MPI -The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable According to ASTM E709
Note:Magnetic Particle Inspection With A/C Hand Yoke Available Areas

U.T-The Above Item Was Found Acceptable As Per ASTM E797

| INSPECTION EQUIPMENT DETAILS | | | | TECHNICAL DETAILS | | | |
|----------------------------------|-----------|--------------|-----------|---------------------------|-------------|---------------------|-------------|
| AC YOKE S.N: | 201504052 | CAL DUE DATE | 11-Apr-25 | White Contrast WCP-2 | MANUFACTURE | BATCH NO | EXPIRE DATE |
| Digital Lux Meter WHITE LIGHT | 2722003 | CAL DUE DATE | 13-Apr-25 | | Magnaflux | 220602 | JUN,2025 |
| UT THICKNESS GAUGE: | 5500391 | CAL DUE DATE | 11-Apr-25 | Black Magnetic Ink 7HF | MANUFACTURE | BATCH NO | EXPIRE DATE |
| UT TEST BLOCK: | NoBo5087 | CAL DUE DATE | 12-Apr-25 | | Magnaflux | 220605 | JULY,2025 |
| ASTM Test Block: | 1657 | CAL DUE DATE | 11-Apr-25 | Concentration of 7HF: | | 1.2 to2.4 ml/100 ml | |
| WHITE LIGHT INTENSITY: | 3630 lux | | | | | | |

| PERSON DETAILS | | REVIEW BY | | | | |
|--------------------|-----------------|------------------------|----------------|---------|-------|--|
| INSPECTOR NAME: | M.Shahzad Ahmed | SENIOR INSPECTOR: | NAVEED HUSSAIN | CLIENT: | | |
| QUALIFICATION: | | INSPECTION SUPERVISOR: | HANI ALI | HB&SIGN | | |
| SIGNATURE & STAMP: | | | | | DATE: | |



AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

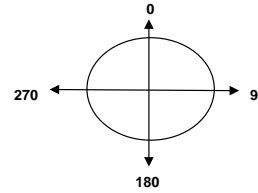
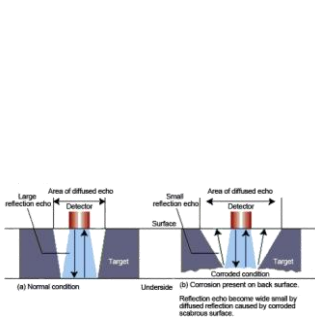


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THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

| | | | |
|---------------------|--|-----------------------|-------------------------------|
| CLIENT: | HALLIBURTON | REPORT NO.: | QC-24-12-TSS-NDT-126 |
| LOCATION: | TSS YARD | JOB NO: | 10122024 |
| WORK ORDER # | ***** | STANDARD: | ASTM E709 & ASTM E797 |
| DATE OF INSPECTION: | Wednesday, December 11, 2024 | NEXT INSPECTION DATE: | Tuesday, June 10, 2025 |
| TYPE OF INSPECTION: | VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING | | |

| | | | |
|--------------|---------------------------------|------------|---------------|
| DESCRIPTION: | FLANGE: 3" 600 CL X 3" 206 WING | SERIAL NO: | HAH 20067-5-1 |
|--------------|---------------------------------|------------|---------------|



ONLINE TRACEABILITY

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

| POINTS | THICKNESS AT POSITION | | MINIMUM THICKNESS IN INCHES |
|--------|-----------------------|--|-----------------------------|
| | A | | |
| 0° | 0.303 | | 0.124 INCH |
| 90° | 0.315 | | |
| 180° | 0.309 | | |
| 270° | 0.312 | | |

INSPECTION RESULT

| | | |
|----------|----------|-------------------------|
| VT & MPI | Accepted | According to ASTM E709 |
| UT | Accepted | According to ASTM E 797 |

Inspection Evaluation

MPI -The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable According to ASTM E709

Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light
Magnetic Particle Inspection With A/C Hand Yoke Welds & Avaliable Areas

U.T-The Above Item Was Found Acceptable As Per ASTM E797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

| AC YOKE S.N: | 201504052 | CAL DUE DATE | 11-Apr-25 | White Contrast WCP-2 | MANUFACTURE | BATCH NO | EXPIRE DATE |
|----------------------------------|-----------|---------------------------|-------------------------|-------------------------------------|-------------|----------------------|-------------|
| Digital Lux Meter WHITE LIGHT | 2722003 | CAL DUE DATE | 13-Apr-25 | | Magnaflux | 220602 | JUN,2025 |
| UT THICKNESS GAUGE: | 5500391 | CAL DUE DATE | 11-Apr-25 | Black Magnetic Ink 7HF | MANUFACTURE | BATCH NO | EXPIRE DATE |
| UT TEST BLOCK: | NoBo5087 | CAL DUE DATE | 12-Apr-25 | | Magnaflux | 220605 | JULY,2025 |
| ASTM Test Block: | 1657 | CAL DUE DATE | 11-Apr-25 | Fluorescent Magnetic Ink 14HF | MANUFACTURE | BATCH NO | EXPIRE DATE |
| DC COIL: | 22650 | CAL DUE DATE | 12-Apr-25 | | Magnaflux | 220306 | March,2025 |
| UV BLACK LIGHT: | 1898977 | CAL DUE DATE | 11-Apr-25 | Concentration of 14HF: | | 0.1 to 0.4 ml/100 ml | |
| WHITE LIGHT INTENSITY: | 3630 lux | UV BLACK LIGHT INTENSITY: | 3150 μw/cm ² | Concentration of 7HF: | | 1.2 to 2.4 ml/100 ml | |

PERSON DETAILS

REVIEW BY

| | | | | | |
|--------------------|------------------|------------------------|----------------|---------|--|
| INSPECTOR NAME: | M. Shalwan Ahmed | SENIOR INSPECTOR: | NAVEED HUSSAIN | CLIENT: | |
| QUALIFICATION: | | INSPECTION SUPERVISOR: | HANI ALI | HD&SIGN | |
| SIGNATURE & STAMP: | | | | DATE: | |

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AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

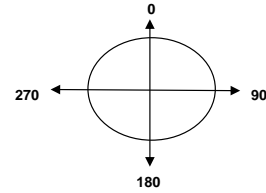
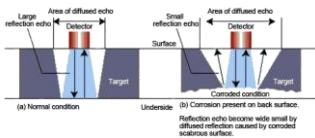


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|---------------------|--|-----------------------|-------------------------------|
| CLIENT: | HALLIBURTON | REPORT NO.: | QC-24-12-TSS-NDT-127 |
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| WORK ORDER # | ***** | STANDARD: | ASTM E709 & ASTM E797 |
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| | | | |
|--------------|--|------------|-------------------|
| DESCRIPTION: | FLANGE: 3" 600 CL X 3" 206 THREAD | SERIAL NO: | WO-16293-7 |
|--------------|--|------------|-------------------|



ONLINE TRACEABILITY

* ALL READINGS IN INCH
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| POINTS | THICKNESS AT POSITION | | MINIMUM THICKNESS IN INCHES |
|--------|-----------------------|--|-----------------------------|
| | A | | |
| 0° | 0.298 | | 0.124 INCH |
| 90° | 0.310 | | |
| 180° | 0.305 | | |
| 270° | 0.314 | | |

INSPECTION RESULT

| | | |
|----------|----------|-------------------------|
| VT & MPI | Accepted | According to ASTM E709 |
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U.T-The Above Item Was Found Acceptable As Per ASTM E797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

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