| Cohlumbongon      | DRAWN BY     | DATE        | REVISION |              |
|-------------------|--------------|-------------|----------|--------------|
| 9cillallinel.Åel. | Yadira Soria | 06 May 2021 |          | X-009014     |
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| Title: Traceability and Manu | facturing Documen | tation Requirements |          |              |

#### 1.0 <u>PURPOSE</u>

The purpose of this document is to define and communicate the minimum general requirements for the supply of production, products and/or services to Schlumberger Well Construction Equipment (also known as Drilling), as per the IADC Manufacturing Record Book Guidance document and API product specs.

#### 2.0 <u>RESPONSIBILITY</u>

**Engineering** is responsible for including this document in the bill of materials of Q1/Q1B drilling part numbers.

**Purchasing** is responsible for identifying these requirements on each Purchase Order issued to the supplier and ensuring the appropriate revision of this document is available to Suppliers.

**Suppliers** and **Schlumberger Facilities** are responsible for understanding and ensuring compliance with this document at all stages to identify, clarify, and produce the required documentation.

#### 3.0 <u>REFERENCES</u>

IADC Manufacturing Record Book Guidance IADC GU-IADC- SC-004

#### **Schlumberger Inspection Documents**

- X-008061 Inspection Method Magnetic Particle Examination
- X-008062 Inspection Method Liquid Penetrant Examination
- X-008063 Inspection Method Radiographic Examination
- X-008058 Ultrasonic Examination of Welds
- X-008064 Inspection Method Ultrasonic Examination
- X-008065 Inspection Method Rockwell and Brinell Hardness Testing

#### Available Schlumberger Templates

- Form 022 Inspection and Test Plan
- Form 137 Preservation Report
- Form 181 Coating / Painting Report
- Form 135 Weld Data Sheet
- Form 136 Post Weld Heat Treatment Report
- Form 139-1 Liquid Penetrant Test Report
- Form 139-2 Magnetic Particle Test Report
- Form 139-3 Ultrasonic Test Report
- Form 138 Hardness Test Report

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## 5.0 DOCUMENTATION REQUIREMENTS

5.1. Below is a list of all the reporting items that have specific documentation requirements. Specific details are listed in Section 6.

Top Level Part

- A. Inspection and Test Plan
- B. Traceability Sheet
- C. Final Assembly Test Report
- D. Coating and Painting
- E. Preservation Report

**Component Level Part** 

- B. Traceability Sheet
- F. Weld Data Sheet
- G. Post Weld Heat Treat
- H. Magnetic Particle Testing
- I. Liquid Penetration Testing
- J. Radiographic Testing
- K. Ultrasonic Testing
- L. Hardness Testing
- M. Electrical Equipment Reports
- N. Controls Equipment
- O. Pressure Vessels/Accumulators/Heat Exchangers/Lube Oil Coolers
- P. Disassembly and Inspection Report (Applicable for Repair and Remanufacture)
- 5.2. For the NDE and Hardness Testing, the report shall meet the Inspection Method document assigned in the BOM plus the additional requirements stated in this document.
- 5.3. The Forms listed in the Reference Section of this document have been created by Quality to meet the latest API product specs as well as IADC requirements. These forms are attached in this document as can be used to create and submit the final report.

Purchasing can provide the native files to suppliers when it is request it by the supplier. These Forms are maintained by Drilling Quality in the <u>quality site</u>.

Facilities and Suppliers have the option to use their own forms, as long as the content in their forms comply with the minimum requirements listed on Section 6.0.

5.4. Every document provided and in the Manufacturing Record Book (MRB) shall have the traceability information (e.g. Part Number, Serial Number, Heat Number, PO Number or Sales Order Number) on each relevant page of the document (i.e. first page of multi-pages reports).

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# 6.0 DETAILED DOCUMENTATION REQUIREMENTS

## A. Inspection Test Plan (ITP)

- Customer Name
- Customer Purchase Order Number
- OEM Sales Order Number
- OEM Facility Ref
- Certification Authority/Third Party Inspection
- Equipment Part Number
- Equipment Description
- ITP Definition & Abbreviations
- Detailed Description of Critical Components, as defined by the OEM
- Detailed Description of Manufacturing Process for critical components

See Template Form 022

## B. Traceability Sheet / Set-out Report listing:

- Serialized (Q1) parts
- Batch traceable (Q1B) parts
- For repair/remanufacture equipment, add original serial numbers or customer property numbers or equipment numbers, as applicable
- Equipment Part Number
- Equipment Description
- Manufacturer Serial Number or Heat/Lot Number of all Critical Components, as defined by the OEM

#### C. Final Assembly Test Report (as identified in ITP, such as: FAT, Load Test, Drift Test, etc.)

- Equipment Part Number
- Manufacturer Serial Number
- Test Record(s) as outlined in OEM Procedure(s)
- OEM Procedure(s) Used

#### **D. Coating and Painting Report**

- Equipment Part Number
- OEM Procedure(s) Used
- Quantity of items coated/painted
- Manufacturer Serial Number
- Manufacturer of coating
- Batch and/or Lot number of coating
- Dry Film Thickness (DFT)
- Atmospheric conditions

See Template Form 181

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#### **E. Preservation Report**

- Equipment Part Number
- Equipment Description
- Date Preservation Began
- OEM Procedure Number

See Template Form 137

#### Material Test Report (MTR) (when applicable)

- Chemical Analysis
- Tensile Mechanical Test
- Hardness Test
- Charpy Impact
- Heat Treatment
- Material Specification Number

#### F. Welding (Original and/or Weld Repair) Weld Data Sheet

- Part Number
- Serial Number
- Welder ID
- Filler Metal Heat and/or Batch Number
- Flux Lot Number
- WPS Number and Revision Number
- Sketch (Weld Maps)
- Filler Metal Type
- Welding Inspection Records (Visual, Fit-Up, Verification)
- Total Remaining PWHT Time per Weld
- Completion date of welding
- NDT and Hardness Report Number (if not traceable and properly identified)

See Template Form 135

#### G. Post Weld Heat Treatment (PWHT)

- PWHT chart(s) with temperature limit, part number, serial number, and/or heat number and/or batch number
- Sketch of local PWHT heater size location and thermocouple(s) location.
- In case PWHT is performed after welding, a Welding Procedure Specification (WPS) Number with revision number.
- PWHT temperature limits a trace sheet showing location of the thermocouple(s) for the local PWHT for each PWHT chart.

See Template Form 136

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## Non-destructive Testing (Original and/or Weld Repair)

- Raw Material NDE (Visual, UT)
- Pre-Weld NDE (Visual, MT)
- Final Surface NDE (MT/PT)
- Final Volumetric NDE (UT/RT)
- Repair Weld NDE (MT/PT/UT/RT)
- Post Load Test NDE

# If any of the below NDE is performed during the manufacturing process, the minimum list of requirements are as follows:

## H. Liquid Penetrant (PT)

• Requirements in X-008062

Additional Requirements:

- Provide identification of the weld, part, or component examined including weld number, serial number or other identifier
- Show results of the examination which include a fail or pass status that advises that the inspection had no relevant indications
- Record light intensity at inspection surface, unique gauge serial number and tool serial number
- Record ambient temperature and temperature surface temperature of the part being inspection
- Visual Examination Acceptance Statement

#### See Template Form 139-1

#### I. Magnetic Particle (MT)

• Requirements in X-008061

Additional Requirements:

- Provide identification of the weld, part, or component examined including weld number, serial number or other identifier
- Show results of the examination which include a fail or pass status that advises that the inspection had no relevant indications
- Record light intensity at inspection surface, unique gauge serial number and tool serial number
- Record ambient temperature and temperature surface temperature of the part being inspected
- Visual Examination Acceptance Statement

See Template Form 139-2

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#### J. Radiographic (RT)

• Requirements in X-008063

Additional Requirements:

- Results of the examination
- Record film density value
- Record lengths of the radiographs (exposures)
- Evaluation and disposition of the material(s) or weld(s) examined
- Visual Examination Acceptance Statement

#### K. Ultrasonic (UT)

• Requirements in X-008058 Ultrasonic Examination of Welds, X-008064 Inspection Method Ultrasonic Examination

Additional Requirements:

- Record beam angle(s) and compression used
- Record correction data (Db)
- Scan plan identification required for volumetric inspection, per code
- Record pass or fail
- Visual Examination Acceptance Statement

#### See Template Form 139-3

#### L. Hardness Records (Original and/or Weld Repair)

• Requirements in X-008065

Additional Requirements:

- Record manufacturer and serial numbers of instruments (equip and scope)
- Record calibration date of instruments used for the inspection (if applicable)
- Record ball diameter (if applicable)
- Record model type (instrument and scope) used for evaluation (if applicable)
- Record calibration block used for inspection
- Record surface conditions

See Template Form 138

#### M. Electrical Equipment Reports

- Insulation Resistance Measurement Test Records
- Dielectric Strength Test Records
- Test certificates

#### N. Controls Equipment

• Records as listed on the product Inspection Plan located on the BOM.

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#### O. Pressure Vessels/Accumulators/Heat Exchangers/Lube Oil Coolers

• Certificate of compliance and applicable industry certifications (such as U1-A Form), traceable to the cylinder's serial number.

#### P. Disassembly and Inspection Scope of Work (Applicable for Repair and Remanufacture)

• Provides detailed scope of work and replacement parts to complete the work in accordance with PO instructions, API and Class requirements as applicable.





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| Comment:                                 |                                    |                   |                    | L      |                           |  |  |                                     |                                      |                                 |  |  |  | lev  |                     |                                    |  |  |                              |                                      | Applicable Specifications   |                         |
|  |                                    |                   |                    |        | Pre-Production<br>Meeting | leitəteM weA<br>Document<br>Records Approval | ענל אפרטיל Duf-192 ענל<br>Tracedility אפרטיל | Raw Material<br>Volumetric NDF (LTT | Start-Up<br>Start-Up<br>Weld Overlay | Start-Up<br>Structural/Pressure | Containing Welds<br>Post Weld<br>Stress Heat Treat | Aepair Weld<br>Weivew                  | Structural/Pressure<br>Containing Weld<br>NDE (UT/PT/MT) | Final Surface, Defect Remov<br>& / or Repair Weld<br>NDE (PT/MT)   | teaT seanbreH leniA | Final<br>Dimensional<br>(Critical) | Pressure Test<br>Load/Pull Test<br>Functional Test<br>Drift test | leni <del>1</del><br>gniteo) (gnitnie9 | Manufacturing<br>Record Book | Pre-Shipment<br>Pre-Shipment<br>Pote | DW OFFSHORE STAVAD.<br>0.55-101 FOR THE<br>0.55-101 FOR THE<br>CASSIFICATION OF THE<br>CASSIFICATION OF THE<br>CASSIFICATION OF THE<br>VERSION:<br>VERSION:<br>VERSION: |                         |
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| Prepared                                 | By :                               |                   |                    |        |                           |  |  |                                     |                                      |                                 |  |  |  |  |                     |                                    |  |  |                              |                                      |   |                         |

CCMQ0102

# WELD DATA SHEET

Schlumberger

Page\_\_ of \_\_\_

| WELD MAP NUMBER:  | SERIAL NUMBER: |
|-------------------|----------------|
| PART NUMBER:      | WORK ORDER:    |
| PART DESCRIPTION: | WELD MAP #     |

|                                    | - | <br>- | - | <br> |  |
|------------------------------------|---|-------|---|------|--|
| PWHT HOURS<br>REMAINING            |   |       |   |      |  |
| FLUX LOT #                         |   |       |   |      |  |
| FLUX TRADENAME                     |   |       |   |      |  |
| FILLER<br>METAL<br>SIZE            |   |       |   |      |  |
| FILLER METAL<br>HEAT AND/OR BATCH# |   |       |   |      |  |
| FILLER METAL BRAND /<br>TRADENAME  |   |       |   |      |  |
| WELDER ID.                         |   |       |   |      |  |
| WPS<br>REV                         |   |       |   |      |  |
| SdM                                |   |       |   |      |  |
| PROCESS                            |   |       |   |      |  |
| # 40                               |   |       |   |      |  |
| WELD MAP<br>ITEM #                 |   |       |   |      |  |
| DATE                               |   |       |   |      |  |

\*\*\* BEFORE MOVING JOB OUT OF THE WELDING AREA, VISUALLY INSPECT FOR POROSITY, SPATTER, UNDERCUT AND INSUFFICIENT WELD SIZE \*\*\*

•

| WELD SUPERVISOR'S REVIEW | DATE |                      |            | FOR QUALITY U     | ISE ONLY (if applicable) |
|--------------------------|------|----------------------|------------|-------------------|--------------------------|
|                          |      |                      |            | THIRD PA          | RTY INSPECTION           |
| CUSTOMER REPRESENTATIVE  | DATE | EMPLOYEE NUMBER/ STA | MP NUMBER: |                   |                          |
|                          |      | THIRD PARTY WITNESS: |            |                   | THRID PARTY NAME:        |
| COMMENTS:                |      | CUSTOMER WITNESS: [  |            | YES, CUSTOMER NAI | ME:                      |
|                          |      |                      |            | VISUAI            | LINSPECTION              |
|                          |      | SAMPLE SIZE: C       | 100% L     |                   |                          |
|                          |      | QUANTITY INSPECTED:  |            | QTY ACCEPTED:     | QTY REJECTED:            |
| ·                        |      | LOT ACCEPTABLE:      | D YES      | OND               |                          |
|                          |      | NCR# (IF APPLICABLE) |            | NCR WELD          | # (IF APPLICABLE) :      |

Schlumberger-Private



CCMQ0098

## POST WELD HEAT TREAT REPORT

| PLANT NO.       SUPPLIER (IF APP.)         DATE:       PO NO. / LINE (IF APP.)         P/N:       REV.         S/N:       NCR REF. (IF APP.)         W/O:       OP#         ERN#. (IF APPLICABLE):         PART DESCRIPTION:         WPS NUMBER |
|---|
| CALIBRATION<br>BRAND / MODEL ID /SERIAL NUMBER  |
| OVEN (If applicable) LOCAL PWHT UNIT  |
| OVEN / LOCAL PWHT UNIT     CALIBRATION DATE       CONTROLLER  |
| POST WELD HEAT TREAT  |
| SOAK TEMPERATURE REQUIREMENT(°F) (MIN) (MAX) SOAK TEMPERATURE ACTUAL (°F) (ACTUAL)  |
| SOAK TIME RANGE       HOUR(S) MIN.       HOUR(S) MAX.         SOAK TIME ACTUAL       HOUR(S)       MINUTES  |
| HEATING RATE °F / HOUR MAXIMUM<br>COOLING RATE °F / HOUR MAXIMUM<br>COOLING METHOD  |
| RESULTS:  |
| ACCEPT REJECT NCR   |
|   |
| EMPLOYEE NAME:     DATE:       STAMP NO.:   |
| THIRD PARTY WITNESS: DATE:  |
| CUSTOMER WITNESS: DATE:   |
| COMMENTS:   |
|   |





# POST WELD HEAT TREAT REPORT

#### PWHT MAP / SKETCH

IN ADDITION TO A PWHT CHART, THE OPERATOR SHALL GENERATE A PWHT MAP/SKETCH CLEARLY IDENTIFYING THE PLACEMENT OF ALL CONTROLLING AND MONITORING THERMOCOUPLES (T/C's) BOTH EXTERNAL AND INTERNAL (WHEN INTERNAL APPLIES). IF LOCAL PWHT IS USED, THE MAP/ SKETCH/ PHOTOGRAPH SHALL ALSO SHOW AN ACCURATE PLACEMENT OF LOCAL PWHT HEATING PADS AND INSULATION.

| EMPLOYEE NAME:       | DATE: |
|----------------------|-------|
| THIRD PARTY WITNESS: | DATE: |
| CUSTOMER WITNESS:    | DATE: |
| COMMENTS:            |       |



# **PRESERVATION REPORT**

| PLANT NO.       SUPPLIER NAME: (IF APP.)         DATE       PURCHASE ORDER/LINE:(IF AP         P/N:       REV.         S/N:       NCR REF. (IF APPLICABLE):         W/O:       OP#                     |
|--|
| PART DESCRIPTION:  |
| PROCEDURE REV PRESERVATION START DATE:   |
| PRESERVATION TERM: UNDER 30 DAYS OVER 30 DAYS  |
| STORAGE OVER 30 DAYS   |
| RUST PREVENTATIVE:   |
| BOP RAMS:<br>REMOVED: YES / NO / NA INTERNAL BODY/CAVITIES WASHED: YES / NO / NA<br>INSPECTED: YES / NO / NA<br>COATED: YES / NO / NA  |
| BOP SEALING ELEMENTS:<br>REMOVED: YES / NO / NA INTERNAL BODY/CAVITIES WASHED: YES / NO / NA<br>INSPECTED: YES / NO / NA<br>COATED: YES / NO / NA  |
| CONNECTION-FACE PROTECTION: YES / NO / NA<br>RING GASKET GROOVE PROTECTION: YES / NO / NA<br>HYDRAULIC OPERATING SYSTEM FLUSH: YES / NO / NA<br>HYDRAULIC FLUSH FLUID:<br>PORTS PLUGGED: YES / NO / NA |

| EMPLOYEE:STAMP ID/NO.: | DATE: |
|------------------------|-------|
| THIRD PARTY WITNESS:   | DATE: |
| CUSTOMER WITNESS:      | DATE: |
| COMMENTS:              |       |
|                        |       |





CCMQ0081

# HARDNESS TEST REPORT

| DATE:   | SUPPLIER NAME (IF APP.)         PURCHASE ORDER/LINE (IF APP.)         EV.       REPORT NO. (IF APP.)         NCR REF. (IF APP):         IP#       ERN #. (IF APP):         EV.       MATERIAL GRADE:         HEAT TREAT CONDITION:         EV.       MS HARDNESS RANGE:         REV.       MS HARDNESS SCALE: |                      |
|---|---|----------------------|
| AMBIENT TEMPERATURE:<br>TEMPERATURE LIMIT: 10 TO 35°C (50 TO 95'  | °F) CALIBRATION BLOCK S/N:  |                      |
| FOR BRINELL TESTING:         EQUIPMENT MANUFACTURER:         EQUIPMENT MODEL:         INDICATE TYPE OF INDENTATION READER:         IDENTIFY TEST CONDITIONS IF OTHER THAN         NOTE: PER ASTM-E110, THREE FORCE APPLICAT         N/A       KGF         HARDNESS RANGE: | EQUIPMENT S/N:<br>EQUIPMENT CAL DATE:<br>INDENTION READER CAL DATE:<br>N 3000 KGF / 10 MM BALL AND 10-15 SECONDS APPLIED FORCE.<br>TIONS AFTER 3000 KGF IS REACHED EQUATES TO 15 SECONDS OF APPLIED FORCE.<br>SECONDS OF APPLIED FORCE<br>HARDNESS SCALE:   | MM                   |
| FOR ROCKWELL TESTING:<br>EQUIPMENT MANUFACTURER:<br>EQUIPMENT MODEL:<br>INDICATE TYPE OF INDENTATION READER:<br>WHEN A LONGER THAN STANDARD TOTAL FORC<br>N/A HARDNESS RANGE:   | EQUIPMENT S/N:<br>CALIBRATION DATE:<br>INDENTION READER CAL DATE:<br>CE DWELL TIME IS REQUIRED, RECORD HARDNESS SCALE USED AND EXTENDED DWELL T<br>HARDNESS SCALE: DWELL TIME:  | <i>TIME.</i><br>SECS |
| TEST RESULTS: SERIAL NO. / LOCATION VALUES  | PASS/FAIL<br>IF FAIL, ENTER NCR #   |                      |
| QTY PRESENTED: SAMPLE SIZE:<br>QTY INSPECTED: QTY ACCEPTEI<br>QTY REJECTED: LOT ACCEPTAE  | AQL: 100%<br>D:<br>BLE?   |                      |



#### CCMQ0044 LIQUID PENETRANT EXAMINATION

| PLANT NO.       SUP         DATE:       PUR         P/N:       REV.         S/N:       NCR         W/O:       OP#         DRAWING NO:       OP#         PART DESCRIPTION:       ACCEPTANCE SPEC:         ACCEPTANCE SPEC:       REV.         OPERATING PROCEDURE X-008062       REV.         PENETRANT METHOD:       PENETRANT TYPE:    | PLIER NAME (IF APP.)<br>CHASE ORDER/LINE (IF APP.)<br>ORT NO. (IF APP.)<br>REF. (IF APP):<br>NO. (IF APP):<br>ERIAL GRADE AND THICKNESS:<br>T TREAT CONDITION:<br>AMBIENT TEMPERATURE:<br>SURFACE TEMPERATURE:<br>SURFACE CONDITION: |
|---|--|
| CALIBRATION<br>SERIAL NUMBER<br>BLACK LIGHT:<br>LIGHT METER:  | CALIBRATION  |
| PENETRANT MATERIALS       CLEANER       PENE         MANUFACTURE ID:  | TRANT REMOVER DEVELOPER  |
| PROCESSING TIME (IN MINUTES)<br>PRE-CLEAN DRY: PENETRANT DWELL TIME<br>INTER-CLEAN DRY: DEVELOPMENT TIME:<br>PRE-CLEAN METHOD:<br>PENETRANT APPLICATION METHOD:<br>INTERMEDIATE CLEAN METHOD:<br>DEVELOPER APPLICATION:<br>AREA EXAMINED:<br>VISIBLE LIGHT INTENSITY<br>BLACK LIGHT INTENSITY (IF APP)<br>VISUAL EXAMINATION ACCEPTABLE | AREA INSPECTED Provide sketch or text as necessary to identify ceverage of NDE   |
| TEST RESULTS:       INDIC.         SERIAL #/WELD# (IF APPL)       RESULT PASS/FAIL       (RELEVANT, N         QUANTITY PRESENTED:       SAMPLE SIZE:       100%         QUANTITY INSPECTED:       QUANTITY REJECTED:       100%         QUANTITY ACCEPTED:       LOT ACCEPTABLE?       NCR # (IF  | ATIONS<br>D INDICATIONS)   |
| EMPLOYEE NAME:<br>EMPLOYEE SIGNATURE<br>CERTIFICATION/QUALIFICATON LEVEL:<br>COMMENTS:<br>THIRD PARTY WITNESS:<br>CUSTOMER WITNESS:   | STAMP NO.:     DATE:       CERT. NUMBER:     DATE:       DATE:     DATE:   |



CCMQ0044

# MAGNETIC PARTICLE EXAMINATION

| PLANT NO<br>DATE:<br>P/N:<br>S/N:<br>W/O:<br>DRAWING NO<br>PART DESCRIPTION:<br>OPERATING PROCEDURE X.008061   | REV SUF<br>PUF<br>REF<br>NCF<br>OP# MAT<br>HEA<br>SUF      | PLIER NAME (IF APP<br>CHASE ORDER (IF A<br>PORT NO. (IF APP.)<br>REF. (IF APP.)<br>ERIAL GRADE/THICKN<br>T TREAT CONDITION:<br>FACE CONDITION: | 2.)<br>PP.)<br>NESS:<br>N:<br>EMPERATURE:        |   |
|--|--|--|--|---|
| ACCEPTANCE SPEC:   | REV REV  | SURFACE T  | TEMPERATURE:                                     |   |
| CALIBRATION  | SERIAL NUMBER  | CALIBI   | RATION   |   |
| BLACK LIGHT:<br>LIGHT METER:<br>MAGNETIZING EQUIPMENT:   |  |  |  |   |
| MAGNETIC PENETRANT MATERIALS   | 6  |  |  |   |
| CLEANER<br>MANUFACTURE ID:<br>BATCH:<br>EXP. DATE<br>PRODUCT TYPE:   | MAGNETIC I   | >OWDER   | REMOVER  | WHITE CONTRAST (IF APPL)                  |
| INSPECTION<br>INSPECTION METHOD:<br>MAGNETIZING EQUIPMENT TYPE:<br>CURRENT TYPE:<br>FIELD STRENGTH VERIFICATION:<br>FIELD STRENGTH (IF APP):<br>COIL TURN (IF APP):<br>PARTICLE TYPE:<br>SUSPENSION VEHICLE (WET METHO<br>BATH CONCENTRATION (EXCLUDING<br>DEMAG METHOD:<br>VISIBLE LIGHT INTENSITY<br>BLACK LIGHT INTENSITY<br>BLACK LIGHT INTENSITY (IF APP)<br>ARITIFICIAL LIGHTING (IF USED):<br>AREA EXAMINED:<br>VISUAL EXAMINATION ACCEPTABLE | AMPERES<br>TURNS<br>DD):<br>G AEROSOL):<br>?               | <br>S<br>ml  | AREA INSPECTE<br>Provide sketch or text a<br>NDE | D<br>as necessary to identify ceverage of |
| TEST RESULTS SERIAL# /WELD# (IF APPL)  | LT PASS/FAIL (RELEVA                                       | NDICATIONS<br>NT, NO INDICATIONS)  |  |   |
| QUANTITY PRESENTED:<br>QUANTITY INSPECTED:<br>QUANTITY ACCEPTED:<br>NCR # (IF APPL)  | SAMPLE SIZE: 100'<br>QUANTITY REJECTED:<br>LOT ACCEPTABLE? | % AQL:   |  |   |
| EMPLOYEE NAME:<br>EMPLOYEE SIGNATURE<br>CERTIFICATION/QUALIFICATON LEV<br>COMMENTS:<br>THIRD PARTY WITNESS:<br>CUSTOMER WITNESS:   | EL:  | CERT. NUM  | .: DATE:<br>IBER:                                |   |



CCMQ0043

# ULTRASONIC EXAMINATION

| PLANT NO<br>DATE:<br>P/N:<br>S/N:<br>W/O:<br>PART DESCRIPTION:  | SUPF<br>PURO<br>REV REPO<br>NCR<br>OP# ERN                                    | PLIER NAME (IF APP.)<br>CHASE ORDER (IF APP.)<br>ORT NO. (IF APP.)<br>REF. (IF APPLICABLE):<br>NO. (IF APP): |                        |
|---|---|--|------------------------|
| ACCEPTANCE SPEC.<br>SCAN PLAN (IF APP.)<br>OPERATING PROCEDURE X-008058   | REV<br>REV  | CONDITION:<br>TEST LOCATION:   |                        |
| CALIBRATION INSTRUMENT / UNIT CALIBRATION BLOCK REFERENCE REFLECTOR OTHER:  | BRAND / MODEL   | SERIAL NUMBER  | CALIBRATION            |
| REFERENCE GAIN LEVEL:   | DB'S DAMPENING / R<br>DISTANCE READING  | EJECT (IF USED):<br>5:   |                        |
| TRANSDUCER         NUMBER       TYPE         SIZE         Image: Size | FREQUENCY   | WAVE ANGLE METH  | HOD COUPLANT           |
| SCANNING GRID SPACING:<br>SCREEN RANGE:<br>SCAN LEVEL:<br>CORRECTION:<br>DB'S<br>SEARCH UNIT CABLE(S) TYPE:<br>SPECIAL EQUIPMENT (IF USED):   | _ 100%  | OTHER VISUAL EXAMINATION A   | CCEPTANCE?             |
| TEST RESULTS         SERIAL       RESULT PASS/FAIL  | NCR (IF APPLICABLE)   | SERIAL RESULT PASS/FAIL  | NCR (IF APPLICABLE)    |
| QUANTITY PRESENTED:   | QUANTITY INSPECTE<br>QUANTITY ACCEPTE<br>QUANTITY REJECTEI<br>LOT ACCEPTABLE? | ED: RESTRICTED ACCE  | S / INACCESSIBLE WELDS |
| EMPLOYEE NAME:  |   | STAMP NO.: DA  | TE:                    |
| CERTIFICATION/QUALIFICATON LEV  | /EL:  | CERT. NUMBER:  |                        |
| THIRD PARTY WITNESS:  |   | DATE:  | _                      |
| CUSTOMER WITNESS:   |   | DATE:  | _                      |
|   |   |  |                        |



# **COATING / PAINTING REPORT**



CCMQ0087

#### **A. GENERAL REFERENCES**

| SLB PLANT NO. / SUPPLIER | WORK ORDER / PURC       | HASE ORDER | COATING SYSTEM |
|--------------------------|-------------------------|------------|----------------|
|                          |                         |            |                |
| PN & REV                 | PART SERIAL N° QUANTITY |            | PROCEDURE/ REV |
|                          |                         |            |                |

#### **B. PRODUCT AND PAINTER REFERENCES**

|                              | 1 <sup>ST</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
|------------------------------|----------------------|----------------------|----------------------|---------------------|
| COATING TYPE                 |                      |                      |                      |                     |
| MANUFACTURER OF<br>COATING   |                      |                      |                      |                     |
| MANUFACTURER<br>SERIAL NO    |                      |                      |                      |                     |
| COATING BATCH NO<br>/ LOT NO |                      |                      |                      |                     |
| PAINTER                      |                      |                      |                      |                     |

#### C. SURFACE PREPARATION: BLASTING CABIN OUTPUT

| DATE:                   |       | TIME: | DEGREE OF CLEA | NNESS: | ABRASIVE TYPE: | METHOD :<br>AUTOM |         |
|-------------------------|-------|-------|----------------|--------|----------------|-------------------|---------|
| ROUGHNESS<br>IN µm (Rz) | MIN.: |       |                | MAX.:  |                |                   | AVERAGE |

#### **D. COATING APPLICATION**

| COATING CABIN INPUT   | DATE:                |                      | TIME                 |                     |
|---|----------------------|----------------------|----------------------|---------------------|
| ATMOSPHERIC CONDITIONS  | 1 <sup>ST</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DATE/TIME   |                      |                      |                      |                     |
| <b>RELATIVE HUMIDITY %</b>  |                      |                      |                      |                     |
| AMBIENT TEMPERATURE IN °C   |                      |                      |                      |                     |
| SUBSTRATE TEMPERATURE IN °C   |                      |                      |                      |                     |
| DEW POINT IN °C   |                      |                      |                      |                     |
|   |                      |                      |                      |                     |
| DRY COAT THICKNESS MEASURE <sup>τ</sup> (μm)  | 1 <sup>ST</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DRY COAT THICKNESS MEASURE <sup>τ</sup> (μm)<br>DATE/TIME                               | 1 <sup>s⊤</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DRY COAT THICKNESS MEASURE <sup>T</sup> (μm)<br>DATE/TIME<br>MINIMUM                    | 1 <sup>st</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DRY COAT THICKNESS MEASURE <sup>T</sup> (μm) DATE/TIME MINIMUM MAXIMUM                  | 1 <sup>st</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DRY COAT THICKNESS MEASURE <sup>T</sup> (µm) DATE/TIME MINIMUM MAXIMUM AVERAGE          | 1 <sup>st</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |
| DRY COAT THICKNESS MEASURE <sup>T</sup> (µm) DATE/TIME MINIMUM MAXIMUM AVERAGE REQUIRED | 1 <sup>st</sup> COAT | 2 <sup>ND</sup> COAT | 3 <sup>RD</sup> COAT | 4 <sup>™</sup> COAT |

#### E. SPECIAL TESTS (Delete where not applicable)

| ADHESION (ON SAMPLES)           | 1 <sup>s⊤</sup> TEST | 2 <sup>ND</sup> TEST | 3 <sup>RD</sup> TEST | 4 <sup>™</sup> TEST | DATE   |  |
|---------------------------------|----------------------|----------------------|----------------------|---------------------|--------|--|
| CROSS-CUT OR PULL-OF            |                      |                      |                      |                     |        |  |
| CLASSIFICATION OR VALUE IN BARS |                      |                      |                      |                     |        |  |
| « HOLIDAY » TEST                | TENSION IN V :       | SION IN V : RESULT   |                      | DATE :              | DATE : |  |
| COMMENTS :                      |                      |                      |                      |                     |        |  |