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| **PHASED ARRAY ULTRASONIC TESTING REPORT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **JOB DETAILS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client: | | | **NCOC N.V.** | | | | Project: | | | | **ESKENE WEST KARABATAN** | | | | | | | | | | Work Location: | | | | **Samal Utility 2** | | | |
| **JOB DESCRIPTION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brief Description of Job: | | | | | | | **Phased Array weld inspection of 4inch Elbow butt weld** | | | | | | | | | | | | | | | | | | | | | |
| Line No.: | | | | | | | **D1-590-ZH-001B** | | | | | | | | | Location: | | | | | **Samal Utility 2** | | | | | | | |
| Material: | | | | | | | **Carbon steel** | | | | | | | | | Surface Condition: | | | | | **Smooth** | | | | | | | |
| Nominal thickness | | | | | | | **6.02 mm** | | | | | | | | | Diameter | | | | | **4 inch** | | | | | | | |
| Part temperature | | | | | | | **30 °C** | | | | | | | | |  | | | | |  | | | | | | | |
| **INSPECTION PROCEDURE** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procedure No: | | | | | **QP-11-PAUT-CM-Q01 REV 01** | | | | | | | In accordance with: | | | | | | **ASME SEC V Art 4** | | | | In accordance with: | | | | | **ASME B31.3 Para 344.6.2** | |
| **INSPECTION EQUIPMENT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S. No | Equipment/  Material Name | | | | | | Manufacturer | | | | | | | Serial No | | | | | Calibration certificate No | | | | | Calibration Expiry date | | | | |
|  | OmniScan MX2 | | | | | | Olympus | | | | | | | 103625 | | | | | BK-01-0126 | | | | | 30.01.2019 | | | | |
|  | Navship Cal block | | | | | | Olympus | | | | | | | 015716 | | | | | - | | | | | - | | | | |
| **EQIPMENT PARAMETERS** | | | | | | | | | | | | | | | | | | | | | **CALIBRATION BLOCK DETAILS** | | | | | | | |
| Mode | | | | N/A | | | | Filter | | 5MHz | | | Points quant'y | | | | | 640 | | | Cal block | | | | | Navship Cal block | | |
| Frequency | | | | 5 MHz | | | | Rectifier | | FW | | | Sum gain | | | | | Auto | | | Material | | | | | CS | | |
| Energy | | | | 40v | | | | Video filter | | Off | | | Ref sensitivity | | | | | 33.7dB | | | Thickness Range | | | | | 75mm | | |
| Pulse width | | | | Auto | | | | Averaging | | 1 | | | Scan sensit'ty | | | | | 6 dB | | | temperature | | | | | Room temperature | | |
| PRF | | | | Optimum | | | | Focus depth | | 20 | | |  | | | | |  | | | Correction Factors | | | | | N/A | | |
| Probe | | | | Ambient | | | | Couplant | | Gel | | |  | | | | |  | | |  | | | | |  | | |
| **SCAN PLAN** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test Ref | | Scan type | | | | Beam type | | | Index offset | | | | | | Start element | | Active elements | | | Minimum angle | | | Maximum  angle | | | | | Angle Step |
|  | | Sectorial | | | | Angle | | | 90 | | | | | | -7 | | 49 | | | 16 | | | 40 | | | | | 70 |

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| **CALIBRATION DETAILS** |
| Calibration on Navships Block using 12.5mm depth hole:      Phased array weld inspection has been carried out on (ø4”X6.02mm) Elbow butt weld.    SCANNED WELD    SBW-01  SBW-02 |
| **SCAN PLAN** |
| **RESULTS**   |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Tag No | Joint No. | Indication  No | Type of Indication | Location (mm) | | Length (mm) | Depth (mm) | | Height (mm) | Surface/ Sub surface Flaw | Results (A or R) | Scanned length (mm) | | Start | End | Start | End | | D1-590-ZH-001B | SBW-01 | - | NSD | - | - | - | - | - | - | - | A | 0-360\* | | D1-590-ZH-001B | SBW-02 | - | NSD | - | - | - | - | - | - | - | A | 0-360\* |   **Note:**   * Results (A-Accept, R-Reject) * NSD : No Significant Defect * ID : Inner Diameter or Surface * OD : Outer Diameter or Surface * Datum ‘0’ of the weld has taken on top dead center and scanned in clock wise direction.   **SCAN IMAGE**  **SBW-01**    **SBW-02**     |  |  |  |  | | --- | --- | --- | --- | | APPROVALS: | | | | | Operator  UT Level III Cer.No. 282671 | ARUL VIGNESH  cer.exp date: 01.05.2021 | Signature: ........................... | Date: 04.07. 2018 | | Supervisor  UT Level III cer. No #309566 | PRAGADA SANTHOSH KUMAR  cer.exp date: 13.06.2022 | Signature: ........................... | Date: 04.07. 2018 | |  |  | | Client Representative: | :………………………….…. | Signature: ........................... | Date: ........................... | |

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