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| **Ultrasonic Thickness Measurement report**  **Протокол по результатам проведения ультразвуковой толщинометрии** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **JOB DETAILS / РАБОЧАЯ ИНФОРМАЦИЯ** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Client**  Клиент | | | | | **NCOC N. V.** | | | | | | | | **Project**  Проект | | | | | | | | **ESKENE WEST** | | | | | |
| **Work location**  Место работы | | | | | **Unit 210 Tr 2** | | | | | | | | **Control object**  Объект контроля | | | | | | | | **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-051**  **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-052**  **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-051**  **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-052** | | | | | |
| **Material**  Марка стали | | | | | **A420/W|PL**  **A333 Gr.6** | | | | | | | | **Dimension**  Размер | | | | | | | | **6’’x7.11 mm;**  **¾”x5.56mm.** | | | | | |
| **Calibration Temperature**  Температура калибровочного блока | | | | | **+2°C** | | | | | | | | **Object Temperature**  Температура объекта контроля | | | | | | | | **+50°C** | | | | | |
| **Surface condition**  Состояние поверхности | | | | | **Coated** | | | | | | | | **Couplant**  Контактная жидкость | | | | | | | | **UT Gel** | | | | | |
| **Correction factors**  Поправочные факторы | | | | | **n/a** | | | | | | | | **Roughness**  Шероховатость | | | | | | | | **-** | | | | | |
| **INSPECTION PROCEDURE / НОРМАТИВНЫЕ ДОКУМЕНТЫ** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Procedure**  Процедура | | | | **QP-11-UTT-Q01**  **Rev 04** | | | | | | **Standard for testing**  Стандарт по контролю | | | | | **GOST 28702-90** | | | | **Standard for item**  Стандарт для ОК | | | | | **ASME B31.3** | | |
| **EQIPMENT PARAMETERS / ПАРАМЕТРЫ ОБОРУДОВАНИЯ** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Probe, S/N**  Датчик, № | | | | | | | **D790, №1306596**  **D798 / 1307120** | | | | | | **Size**  Размер | | | | | | | | **11 mm**  **7.2mm** | | | | | |
| **Angle**  Угол ввода | | | | | | | **0º** | | | | | | **Crystal**  ПЭ | | | | | | | | **Dual** | | | | | |
| **Frequency**  Частота преобразователя | | | | | | | **5 MHz; 7.5 MHz** | | | | | | **Accuracy**  Точность | | | | | | | | **± 0,1 mm** | | | | | |
| **CALIBRATION BLOCK DETAILS / ПАРАМЕТРЫ КАЛИБРОВОЧНОГО БЛОКА** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Calibration Block**  Калибровочный блок | | | | | | | **Step wedge** | | | | | | **Calibration Block Range**  Диапазон толщин калибровочного блока | | | | | | | | **2.5-12.50 mm** | | | | | |
| **INSPECTION EQUIPMENT / ОБОРУДОВАНИЕ ИНСПЕКЦИОННОГО КОНТРОЛЯ** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **№** | | **Equipment**  Оборудование | | | | **Manufacture** Изготовитель | | | | | **Serial number**  Серийный номер | | | | | | **Certificate**  Сертификат поверке | | | | | | **Expire date**  Дата истечения поверки | | | |
|  | | 38DL PLUS | | | | OLYMPUS | | | | | 171421601 | | | | | | KZ-01-21-Ж-0169 | | | | | | 01.03.2022 | | | |
|  | | Step wedge calibration block | | | | OLYMPUS | | | | | 0265 19 | | | | | | - | | | | | | - | | | |
| **Job description:**   1. Echo to echo UT technique was used. 2. Inspection performed on South, North, West, East, Top, Bottom, Extrados and Intrados sides related to object position. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Notes** / Примечания:  N/A-not applicable. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **INSPECTION RESULTS / РЕЗУЛЬТАТЫ КОНТРОЛЯ** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Line / Tag N / Номер** | | **Item description/**  **Участок контроля** | **Section number/**  **Номер сечения** | | | | **Diameter, inch /**  **Диаметр, дюйм** | **Nominal thickness, mm/**  **Номинальная толщина, мм** | | | **South, mm/**  **Юг, мм** | | **North, mm /**  **Север, мм** | | **West, mm /**  **Запад, мм** | | **East, mm /**  **Восток, мм** | | **Top, mm /**  **Верх, мм** | | **Bottom, mm /**  **Низ, мм** | | | **Extrados, mm /**  **Внешний радиус, мм** | **Intrados, mm /**  **Внутренний радиус, мм** |
| **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-052** | | CML-03  Elbow | 1 | | | | 6” | 7.11 | | | - | | **-** | | 7.65 | | 7.17 | | - | | - | | | 7.48 | 7.76 |
| 2 | | | | - | | **-** | | 7.85 | | 7.58 | | - | | - | | | 7.28 | 7.81 |
| 3 | | | | - | | **-** | | 7.50 | | 7.15 | | - | | - | | | 7.41 | 7.45 |
| CML-07  Elbow | 1 | | | | 7.93 | | 7.66 | | - | | - | | - | | - | | | 7.21 | 7.16 |
| 2 | | | | 7.83 | | 7.81 | | - | | - | | - | | - | | | **7.10** | 7.24 |
| 3 | | | | 7.68 | | 7.49 | | - | | - | | - | | - | | | 7.12 | 7.27 |
| **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-052** | | CML-15  Dead  Lag | 1 | | | | 3/4” | 5.56 | | | 5.32 | | 5.34 | | **5.29** | | 5.33 | | - | | - | | | - | - |
| **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-051** | | CML-12  Elbow | 1 | | | | 6” | 7.11 | | | 7.97 | | 7.69 | | - | | - | | - | | - | | | 7.40 | 7.11 |
| 2 | | | | 7.91 | | 8.02 | | - | | - | | - | | - | | | 7.12 | 7.24 |
| 3 | | | | 7.68 | | 7.57 | | - | | - | | - | | - | | | 7.41 | 7.11 |
| CML-13  Elbow | 1 | | | | 6” | 7.11 | | | - | | - | | 7.88 | | 7.85 | | - | | - | | | 7.46 | 7.24 |
| 2 | | | | - | | - | | 8.24 | | 8.06 | | - | | - | | | 7.19 | 7.31 |
| 3 | | | | - | | - | | 8.07 | | 7.97 | | - | | - | | | 7.27 | 7.15 |
| CML-11  Pipe | 0 | | | | 6” | 7.11 | | | **6.60** | | 7.55 | | - | | - | | 7.40 | | 6.70 | | | - | - |
| 100 | | | | **6.62** | | 7.43 | | - | | - | | 7.21 | | 6.78 | | | - | - |
| 200 | | | | **6.53** | | 7.42 | | - | | - | | 7.15 | | 6.69 | | | - | - |
| 300 | | | | **6.57** | | 7.46 | | - | | - | | 7.18 | | 6.85 | | | - | - |
| 400 | | | | **6.61** | | 7.38 | | - | | - | | 7.09 | | 6.66 | | | - | - |
| 500 | | | | **6.60** | | 7.42 | | - | | - | | 7.21 | | 6.73 | | | - | - |
| 600 | | | | **6.65** | | 7.36 | | - | | - | | 7.28 | | 6.73 | | | - | - |
| **INSPECTION RESULTS / РЕЗУЛЬТАТЫ КОНТРОЛЯ** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Line / Tag N / Номер** | | **Item description/**  **Участок контроля** | **Section number/**  **Номер сечения** | | | | **Diameter, inch /**  **Диаметр, дюйм** | **Nominal thickness, mm/**  **Номинальная толщина, мм** | | | **South, mm/**  **Юг, мм** | | **North, mm /**  **Север, мм** | | **West, mm /**  **Запад, мм** | | **East, mm /**  **Восток, мм** | | **Top, mm /**  **Верх, мм** | | **Bottom, mm /**  **Низ, мм** | | | **Extrados, mm /**  **Внешний радиус, мм** | **Intrados, mm /**  **Внутренний радиус, мм** |
| **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-051** | | CML-01  Elbow | 1 | | | | 6” | 7.11 | | | - | | - | | 7.19 | | 7.27 | | - | | - | | | 7.19 | 7.43 |
| 2 | | | | 6” | 7.11 | | | - | | - | | 7.68 | | 7.90 | | - | | - | | | 7.45 | 7.50 |
| 3 | | | | 6” | 7.11 | | | - | | - | | 7.55 | | 7.69 | | - | | - | | | 7.44 | 7.71 |
| CML-02  Elbow | 1 | | | | 6” | 7.11 | | | - | | - | | - | | - | | 7.69 | | 7.68 | | | 7.77 | 7.60 |
| 2 | | | | 6” | 7.11 | | | - | | - | | - | | - | | 7.91 | | 7.75 | | | 7.54 | 7.44 |
| 3 | | | | 6” | 7.11 | | | - | | - | | - | | - | | 7.80 | | 7.76 | | | 7.52 | 7.32 |
| CML-04A  Nipolet | 1 | | | | 3/4 | 5.56 | | | 5.39 | | 5.43 | | 5.31 | | **5.28** | | - | | - | | | - | - |

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| Examined by / Контроль провёл: | | Approved by / Протокол утвердил: | | Client representative /  Представитель клиента | |
| Name / ФИО | Zhuravlyov Sergey | Name / ФИО | Kuryanau Dzmitry | Name / ФИО |  |
| Signature / Подпись |  | Signature / Подпись |  | Signature / Подпись |  |
| Date / Дата | 03.12.2021 | Date / Дата | 03.12.2021 | Date / Дата |  |
| Cert. № /  № серт-та | UT L II cert. No. 63-05-19  expire date: 28.05.2022 | Cert. № /  № серт-та | UT L II cert. No 2B 230/20  expiry date 31.05.2025 | Cert. № /  № серт-та |  |

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| Annex 1 / Приложение 1  Inspection Drawing / Схема контроля |
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| **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-052** |
|  |
| **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-052** |
| Annex 1 / Приложение 1  Inspection Drawing / Схема контроля |
|  |
| **A1-2102-CS-041-6-A18-WN KE01-A1-210-PO-P-DI-8022-051** |
| **CML-04A**  **Nipolet** |
| **A1-2102-CS-038-6-A18-WN KE01-A1-210-PO-P-DI-8020-051** |