Description: Radiographic Testing	**Date:2026/01/28**

Technical Data Sheet for the supply of: RT services

	Name	Signature	Date
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REVISION HISTORY

Rev	Date	Description of changes
1.0	See signature block	First issue

1 Scope

This specification defines the requirements for Radiographic Testing (RT) of welds in KNPS, ensuring compliance with ASME Section III, Division 1, and Subsection NCD

2. Applicable Codes and Standards

All RT services shall comply with the following standards and codes:

- ASME Section III, NCD-5300 – Radiographic Examination for Class 3 Components
- ASME Section V, Article 2 – Radiographic Testing (RT) Techniques and Procedures
- ISO 17025 – General Requirements for the Competence of Testing Laboratories
- Doc No: AM-QAP4-QAR-0009 Rev 10.0 – Quality Assurance Requirements for Testing Services.
- And this TDS

3. Examination Requirements

3.1 Radiographic Method

- Radiographic Technique: Single-wall exposure (SWE) or Double-wall viewing (DWV), depending on weld geometry

  Source side preferred; film side placement permitted with justification

- Radiographic Technique Qualification: Must comply with essential variables in ASME Section V, T-271

3.3 Examination Coverage

- 100% RT for full penetration welds

4. Acceptance Criteria

All radiographic images shall be evaluated per the following:

- ASME Section III, NCD – Defect evaluation and disposition
- Unacceptable defects:
- Cracks, lack of fusion, incomplete penetration, and sharp linear indications
- Porosity, slag inclusions, and other discontinuities and any other discontinuity not noted.

5**. Personnel Qualification and Certification**

- RT Technicians must be certified per ASNT SNT-TC-1A
- Level III personnel shall approve all RT procedures

6. Reporting and Documentation

The RT service provider shall submit:

- RT Examination Report, including:
  - Weld joint identification and location
  - Source type, exposure parameters, and technique used
  - IQI type, placement, and sensitivity achieved
  - Name of the examination body.
  - Object. And Material.
  - Heat treatment where applicable
  - Geometry of the weld.
  - Material thickness.
  - Welding process.

- Quality levels.
- Inspection code. And Acceptance criteria.
- Specification of examination including requirements for acceptance.
- Radiographic technique and class, required IQI sensitivity in accordance with this
- Part of ISO 17636 or equivalent.
- Test arrangement in accordance with the applicable construction standard.
- System of marking used.
- Film position plan.
- Radiation source, type and size of focal spot and identification of equipment used.
- Defect evaluation per ASME NC/ ND-5330

- Retention of Reports: All records shall be maintained for at least 5 years

7. Radiation Safety and Regulatory Compliance

- All radiographic work must comply with ANSI N43.3 and local radiation protection regulations
- Controlled radiation exclusion zones must be established to prevent unauthorized exposure
- Radiation safety procedures, shielding, and personnel dosimetry must comply with regulatory requirements

8. Deliverables

The RT provider shall submit the following:

- Certified RT Examination Report with findings and film/digital evaluations
- Personnel Certification Records (ASNT Level II/III)
- Calibration Records of RT Equipment

9 Quality Assurance Requirements

9.1 All general and specific Quality Assurance requirements shown in the Purchase Order shall be met.

10 Handling of Components

All products and chemicals in contact with the material must meet the following requirements:

10.1. Total halogens (chlorine + fluorine + bromine) < 200 ppm

10.2Total sulphur < 200 ppm

10.3. Other prohibited materials not allowed as a known constituent of the product: lead, zinc, copper, aluminium, cadmium, tin, mercury, antimony, bismuth, silver, cobalt, arsenic, rare earths, gallium, indium, ferric iron salts, low melting point alloys in general and their compounds.