1. (normative)  
   NDT report - DRD
   1. DRD identification
      1. Requirement identification and source document

This DRD is called from ECSS-Q-ST-70-15, requirements 6.1.5a, 6.2.3.2a., 6.3.5a, 6.4.6a, 6.5.5a, 6.6.5a and 6.7.4.5a.

* + 1. Purpose and objective

The purpose of the NDT report is to record all necessary details that are needed for traceability of testing conditions and results.

The layout for NDT report can be prepared as per the example shown in EN ISO 3452-1:2013 Annex C.

* 1. Expected response
     1. Scope and content

General

The NDT report shall be developed and include, but not limited to, the following:

Reference to a test procedure or a plan

Environment

Date and place of testing

Facility

Temperature

Humidity

Illumination

Description of the object

Part ID number

Object classification

Dimensions

Material

Quantity

Batch number

Surface condition

Manufacturing stage process details

Designation of test object

Conditions of testing

Inspection of equipment used

Manufacturer and model number of all instruments to be used for NDT testing

Calibration status

Consumables

Critical zones testing

Classification and justification of Standard fracture control NDT or Special fracture control NDT inspections.

Registration level

Acceptance criteria

Indications above registration level

Indications above acceptance level

Appraisal of indications against acceptance criteria

Any detected cracks or crack-like discontinuities regardless of their size or disposition

Non-acceptance of testing object

discontinuities descriptions

locations

sizes

non-conformances and problems encountered

any detected cracks or crack-like discontinuities regardless of their size or disposition

Personnel of inspectors and approvals

name and qualifications level of inspector

signature

Evaluation of special conditions that affect Standard fracture control NDT

Applied software and its version

Data storage

Anomalies

Responsible Level 3 shall approve the following:

Relevant NDT procedure,

Release of a part with indication.

Presence of peculiarities identified by inspectors shall be recorded in non-conformance reports if confirmed to be nonconforming by Level 3.

Additional requirements for different testing types

Visual test

The visual test report shall contain information in accordance with documentation requirements from EN ISO 17637:2016 and EN ISO 17635:2016.

Leak test

The leak test report shall include:

Leak testing method,

Leak testing devices,

Leak test medium and gas concentration,

Test pressure and test time,

Leak detection threshold,

Ambient gas concentration,

Determined leak rate,

Sketch of the test set-up and leakage plan,

Evaluation.

Dye penetrant test

The dye penetrant test report shall contain information in accordance with documentation requirements from all of the ISOs, (EN ISO 3452-1:2013, EN ISO 3452-2:2013, EN ISO 3452-3:2013) or ASTM E 1417:2016.

Eddy current test

The eddy current test report shall contain details of the test carried out and include the following information:

Technique identification,

Results of test, including sketches, instrument settings,

Test set used.

Magnetic particle test

The magnetic particle test report shall contain information in accordance with documentation requirements from ASTM E 1444/E 1444M:2016 and EN ISO 9934-1:2016.

X-ray radiographic test

The X-ray radiographic test report shall contain information in accordance with documentation requirements from ASTM E 1742/E1742M:2018 or EN ISO 17636:2013-1 and EN ISO 17636-2:2013.

Ultrasonic test

The ultrasonic testing report shall include the following:

Inspection method:

frequency

sensitivity level

Inspection equipment:

device

probes

software

Sensitivity calibration (reference)

Discontinuity characteristics:

discontinuity amplitude, size

location (position, depth)

type

geometry

peculiarities

Sketch for non-standard discontinuities and peculiarities

Scanning speed and index in case of automatic testing

* + 1. Special remarks

In the case of application of proprietary processes and methods restriction of documentation shall be clarified between supplier and customer prior to program.

The documents supporting the NDT Report shall be kept as agreed between customer and supplier.

In the case of NDT qualification test reports the following additional information shall be provided:

Certification of inspectors

Demonstration of required POD

In case there is no discontinuity to report, a chart with the stamp of NDT personnel may be accepted instead of a NDT report, provided the traceability to the part and process is given.

A simplified reporting procedure may be agreed between customer and supplier if the following conditions are met:

There is a traceability of the inspector Level 3 qualification.

There is traceability to the data from NDT report.

1. Example of simplified reporting procedure is certificate with a digital stamp.