|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name of Inspector:** |  | **Organisation:** |  | **Inspector Signature:** |  |
| **Technical Expert Name:** |  | **Technical Expert Signature:** |  | **Date:** |  |

|  | |  | | **Material** | |  | | | **Technical Expert Review** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | | **Sub category** | | Al, Cu, Fe, Mg, Ni, SS, Zn, Ti, Other | | **Inspector**  *(Refer to Note 1)* | | **TE Review**  Agree / Disagree  Y/N | Witness / Interview  W/I | Comments |
| **4.75 Welder Qualification Tests** | | | | | | | | | | |
| (g) Weld Tests | | Tensile | |  | |  | |  |  |  |
| Bend | |  | |  | |  |  |  |
| Nick Breaks | |  | |  | |  |  |  |
| Macroexamination | |  | |  | |  |  |  |
| **4.76 Metals and Metal Products**  **(to specified Standards to support inspection activities)** | | | | | | | | | | |
| (a) Tension Tests | | | |  | |  | |  |  |  |
| (b) Compression Tests | | | |  | |  | |  |  |  |
| (c) Bend Tests | | | |  | |  | |  |  |  |
| (d) Deflection Tests | | | |  | |  | |  |  |  |
| (e) Hardness Tests | | Vickers | |  | |  | |  |  |  |
|  | | Rockwell | |  | |  | |  |  |  |
|  | | Brinell | |  | |  | |  |  |  |
| (f) Impact tests | | Charpy | |  | |  | |  |  |  |
| (g) Weld Tests | | Tensile | |  | |  | |  |  |  |
|  | | Bend | |  | |  | |  |  |  |
|  | | Nick Breaks | |  | |  | |  |  |  |
|  | | Macroexamination | |  | |  | |  |  |  |
| (h) Others Tests (specify) | |  | |  | |  | |  |  |  |
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|  | |  | |  | |  |  |  |
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| **4.81 NDT by Radiography** | | | | | | | | | | |
| (a) Radiographic examination of metals | | | | | | | | | | |
|  | | (i) Single wall, rolled or wrought | |  | |  | |  |  |  |
|  | | - Thickness Measurements | |  | |  | |  |  |  |
|  | | - Corrosion Pitting | |  | |  | |  |  |  |
|  | | (ii) Welded Joints | |  | |  | |  |  |  |
|  | | (iii) Castings | |  | |  | |  |  |  |
|  | | (iv) Forgings | |  | |  | |  |  |  |
|  | | (v) Other specified metallic products | |  | |  | |  |  |  |
| (b) Radiographic exam of bonded metals | | | | | | | | | | |
|  | (i) Soldered and brazed joints | | |  | |  | |  |  |  |
|  | (ii) Hard faced components | | |  | |  | |  |  |  |
| (c) Radiographic exam of metal inserts in non metals | | | | | | | | | | |
|  | (i) Concrete | | |  | |  | |  |  |  |
|  | (ii) Reinforcing in belts, hoses etc | | |  | |  | |  |  |  |
| (d) Radiographic exam of non metals | | | | | | | | | | |
|  | (i) Rubber and plastics | | |  | |  | |  |  |  |
|  | (ii) Timber | | |  | |  | |  |  |  |
|  | (iii) Bonded non-metallic components | | |  | |  | |  |  |  |
|  | (iv) Other specified non metals | | |  | |  | |  |  |  |
| (e) Digital Radiography | | | |  | |  | |  |  |  |
| **4.82 NDT by Ultrasonics** | | | | | | | | | | |
| (a) Ultrasonic exam of metals | | | | | | | | | | |
|  | (i) Single wall, rolled or wrought | | | |  | |  |  |  |  |
|  | - Thickness Measurements | | | |  | |  |  |  |  |
|  | - Corrosion Pitting | | | |  | |  |  |  |  |
|  | (ii) Welded Joints | | | |  | |  |  |  |  |
|  | (iii) Castings | | | |  | |  |  |  |  |
|  | (iv) Forgings | | | |  | |  |  |  |  |
|  | (v) Extruded products | | | |  | |  |  |  |  |
|  | (vi) Other specified metallic products & machined components | | | |  | |  |  |  |  |
|  | (vii) Nozzle and node welds | | | |  | |  |  |  |  |
| (b) Ultrasonic exam of bonded metals | | | | | | | | | | |
|  | (i) Soldered and brazed joints | | | |  | |  |  |  |  |
|  | (ii) Hard faced components | | | |  | |  |  |  |  |
|  | (iii) Machine bearings | | | |  | |  |  |  |  |
|  | (iv) Friction welded components | | | |  | |  |  |  |  |
|  | (v) Other specified components | | | |  | |  |  |  |  |
| (c) Ultrasonic examination of Components and Assemblies | | | | | | | | | | |
|  | | | (i) Aircraft Structures | |  |  | |  |  |  |
|  | | | (ii) Bonded Assemblies | |  |  | |  |  |  |
|  | | | (iii) Components & Assemblies | |  |  | |  |  |  |
|  | | | (iv) Thickness Measurements | |  |  | |  |  |  |
| (d) Ultrasonic exam of non-metals | | | | | | | | | | |
|  | | | (i) Rubber and plastics | |  |  | |  |  |  |
|  | | | (ii) Timber and plywood | |  |  | |  |  |  |
|  | | | (iii) Bonded non-metallic components | |  |  | |  |  |  |
|  | | | (iv) Ceramics and refractories | |  |  | |  |  |  |
|  | | | (v) Other specified non-metals | |  |  | |  |  |  |
| (e) Manual Phased Array | | | | |  |  | |  |  |  |
|  | | | (i) Single wall, rolled or wrought | |  |  | |  |  |  |
|  | | | - Thickness Measurements | |  |  | |  |  |  |
|  | | | - Corrosion Pitting | |  |  | |  |  |  |
|  | | | (ii) Welded Joints | |  |  | |  |  |  |
|  | | | (iii) Castings | |  |  | |  |  |  |
|  | | | (iv) Forgings | |  |  | |  |  |  |
|  | | | (v) Extruded products | |  |  | |  |  |  |
|  | | | (vi) Other specified metallic products & machined components | |  |  | |  |  |  |
| **4.83 NDT by Visual Inspection** | | | | | | | | | | |
| (a) Visual inspection of metals | | | | | | | | | | |
|  | | | (i) Flat or rolled products | |  |  | |  |  |  |
|  | | | (ii) Welded joints | |  |  | |  |  |  |
|  | | | (iii) Castings | |  |  | |  |  |  |
|  | | | (iv) Forgings | |  |  | |  |  |  |
|  | | | (v) Metallic coatings | |  |  | |  |  |  |
| **4.84 NDT by Dye Penetrant Methods** | | | | | | | | | | |
| (a) Visible dye | | | | |  |  | |  |  |  |
|  | | | (i) Water washable method | |  |  | |  |  |  |
|  | | | (ii) Solvent removable method | |  |  | |  |  |  |
|  | | | (iii) Post emulsifiable method | |  |  | |  |  |  |
| (b) Fluorescent dye method | | | | | | | | | | |
|  | | | (i) Water washable method | |  |  | |  |  |  |
|  | | | (ii) Solvent removable method | |  |  | |  |  |  |
|  | | | (iii) Post emulsifiable method | |  |  | |  |  |  |
| **4.85 NDT by Magnetic Particle Methods** | | | | | **Power Capability** Amps - AC or DC | | | | | |
| (a) Magnetic flow method | | | | | | | | | | |
|  | | | (i) Welded joints | |  |  | |  |  |  |
|  | | | (ii) Forgings | |  |  | |  |  |  |
|  | | | (iii) Castings | |  |  | |  |  |  |
|  | | | (iv) Machined parts | |  |  | |  |  |  |
| (b) Current flow method | | | | | | | | | | |
|  | | | (i) Welded joints | |  |  | |  |  |  |
|  | | | (ii) Forgings | |  |  | |  |  |  |
|  | | | (iii) Castings | |  |  | |  |  |  |
|  | | | (iv) Machined parts | |  |  | |  |  |  |
| (c) Coil method | | | | | | | | | | |
|  | | | (i) Welded joints | |  |  | |  |  |  |
|  | | | (ii) Forgings | |  |  | |  |  |  |
|  | | | (iii) Castings | |  |  | |  |  |  |
|  | | | (iv) Machined parts | |  |  | |  |  |  |
| **4.86 NDT by Eddy Current** | | | | | | | | | | |
| (a) Surface flaw detection | | | | |  |  | |  |  |  |
| (b) Metallic coating (Thickness) | | | | |  |  | |  |  |  |
| (c) Sorting of materials / components | | | | |  |  | |  |  |  |
| (d) Sub-surface flaw detection | | | | |  |  | |  |  |  |
| (e) Weld testing | | | | |  |  | |  |  |  |
| **4.87 NDT by Specialised Techniques** | | | | | | | | | | |
| (a) Ultrasonic examination by Time of Flight Diffraction | | | | |  |  | |  |  |  |
| (b) Acoustic emission testing | | | | |  |  | |  |  |  |
| (c) Flaw detection in coatings by electrical continuity | | | | |  |  | |  |  |  |
| (d) Automatic Phased array | | | | |  |  | |  |  |  |
| (e) IRIS (Internal Rotation Inspection System) - UT method | | | | |  |  | |  |  |  |
| (f) Alternating Current Field Measurement (ACFM) | | | | |  |  | |  |  |  |
| (g) Magnetic Flux Leakage | | | | |  |  | |  |  |  |

**Please Complete shaded sections only and submit to IANZ**

**Note 1: Competence Model inspectors:** indicate which categories the inspector has been authorised for, either as a trainee (T), inspector (I) or a signatory (S)

**Signatory Model signatories:** indicate if this is an initial assessment (IA) or a re-assessment (R) for each of the relevant categories