

REQUIREMENTS FOR RADIOGRAPHY OF CASTINGS

1. ALL RADIOGRAPHY OF CASTINGS, WHEN INVOKED BY THIS PURCHASE ORDER OR ANY SUB-TIER DOCUMENTS MUST BE PERFORMED IN ACCORDANCE WITH AN APPROVED RSSS.
2. RADIOGRAPHY OF MORE THAN ONE CASTING PER FILM IS PROHIBITED
3. THE SELLER OR THE PERFORMING ACTIVITY SHALL CONTACT THE BUYER PRIOR TO PERFORMING RADIOGRAPHY OF ANY CASTING(S) TO DETERMINE IF A PREVIOUSLY APPROVED RSSS IS AVAILABLE. ELECTRIC BOAT HAS AN RSSS DATABASE WITH THOUSANDS OF APPROVED TECHNIQUES.
4. IF A PREVIOUSLY APPROVED RSSS IS NOT AVAILABLE, THE SELLER OR ACTIVITY PERFORMING THE RADIOGRAPHY SHALL PREPARE AN RSSS IN ACCORDANCE WITH NAVSEA TECHNICAL PUBLICATION T9074-AS-GIB-010/271, PARAGRAPH 3.3.1.1 THAT ASSURES ADEQUATE RADIOGRAPHIC COVERAGE, AS SPECIFIED BY THE ENGINEERING DRAWING, AND TO AID IN THE PROPER INTERPRETATION OF THE RADIOGRAPHS. AS A MINIMUM, THE RSSS SHALL BE CREATED USING THE TEMPLATE COVER SHEET ATTACHED, A DRAWING WHICH SHOWS LOCATION MARKERS, FILM PLACEMENTS AND RADIATION DIRECTIONS IN RELATION TO THE PART, AND THE DRAWING VIEW THAT PROVIDES THE DESIGN DIMENSIONS USED TO DETERMINE MATERIAL THICKNESSES FOR PENETRAMETER SELECTION. THE SELLER SHALL FORWARD THE RSSS TO THE BUYER VIA SPARS (EVPAR), AS WELL AS ALL QUALIFYING RADIOGRAPHS. THE RSSS MUST BE APPROVED PRIOR TO SHIPMENT OF THE HARDWARE.
5. IF A PREVIOUSLY APPROVED RSSS IS AVAILABLE, THE SELLER OR ACTIVITY SHALL PERFORM THE RADIOGRAPHY IN ACCORDANCE WITH THE APPROVED RSSS. ADMINISTRATIVE CHANGES TO REFLECT THE USE OF LATEST REVISION OF THE PERFORMANCE OR FABRICATION SPECIFICATION DO NOT REQUIRE REAPPROVAL. HOWEVER, DEVIATIONS (EXCEPT AS NOTED BELOW) FROM AN APPROVED RSSS SHALL BE SUBMITTED TO THE BUYER FOR RE-APPROVAL USING A VIR HIGHLIGHTING THE CHANGES AND PROVIDING TECHNICAL JUSTIFICATION FOR EBC APPROVAL. ACCEPTABLE VARIATIONS OR SUBSTITUTIONS NOT REQUIRING REAPPROVAL ARE AS FOLLOWS:

* SOURCE TYPE. ANY SOURCE MAY BE SUBSTITUTED FOR THAT SHOWN ON THE RSSS PROVIDED THE MATERIAL THICKNESS VERSUS ENERGY RANGES USED ARE CONSISTENT WITH THOSE RECOMMENDED BY NAVSEA TECHNICAL PUBLICATION T9074-AS-GIB-010/271, FIGURES 1, 2 AND 3. HOWEVER, IF THE APPROVED RSSS ALLOWS 2-4T SENSITIVITY, THIS

QUALITY LEVEL DOES NOT APPLY TO THE SOURCE SUBSTITUTED IF 2-2T IS REQUIRED.

- * SOURCE SIZE.
- * SOURCE STRENGTH (CURIES OR KV).
- * SOURCE-TO-FILM DISTANCE.
- * PENETRATOR OR BLOCK MATERIAL GROUP. ONLY LOWER GROUP THAN REQUIRED (I.E. CASTING IS GR. IV, THE PREVIOUSLY APPROVED RSSS USED GR. I PENE'S/BLOCKS, A NEW RSSS USING GR. II OR GR. III DO NOT REQUIRE RE-APPROVAL.
- * PENETRATOR SIZE. ONLY SMALLER THAN APPROVED.
- * BLOCK SIZE. ONLY THICKER THAN APPROVED.
- * PENETRATOR PLACEMENT. RELOCATING PENETRATORS FROM THE PART TO A REPRESENTATIVE BLOCK OF EQUAL OR GREATER THICKNESS, OR FROM A BLOCK TO THE PART.
- * FILM SIZE, TYPE, AND QUANTITY.

6. A SYSTEM OF POSITIVE IDENTIFICATION OF THE FILM SHALL BE USED AND EACH FILM SHALL HAVE A UNIQUE IDENTIFICATION RELATING IT TO THE ITEM BEING INSPECTED. AS A MINIMUM, THE FOLLOWING ADDITIONAL INFORMATION SHALL APPEAR ON EACH RADIOGRAPH OR IN THE RECORDS ACCOMPANYING EACH RADIOGRAPH:

- * IDENTIFICATION OF THE ORGANIZATION MAKING THE RADIOGRAPH.
- * DATE OF EXPOSURE.
- * UNIQUE IDENTIFICATION OF THE PART.
- * WHETHER THE RADIOGRAPH IS OF THE ORIGINAL AREA OR A REPAIR AREA.

7. RADIOGRAPHY OF A REPAIRED AREA SHALL BE IN ACCORDANCE WITH THE SAME TECHNIQUE AS THAT USED FOR ORIGINAL RADIOGRAPHY. RADIOGRAPHS SHALL BE IDENTIFIED WITH THE SAME SERIAL NUMBER USED FOR ORIGINAL RADIOGRAPHS FOLLOWED BY THE LETTER R AND A NUMBER (1, 2, ETC.) TO INDICATE THE TIMES THE AREA INVOLVED HAS BEEN REPAIRED. (NOTE: ONLY ONE RT NUMBER PER CASTING IS PERMITTED).

8. ELECTRONIC VPAR SUBMITTALS OF A NEW SHOOTING SKETCH SHALL CONTAIN THE FOLLOWING INFORMATION IN THE DESCRIPTION OF DOCUMENT BLOCK FOR RECORDS PURPOSES.

1. A STATEMENT DESCRIBING THE PURPOSE OF THE SUBMITTAL, I.E. 'NEW SHOOTING SKETCH SUBMITTAL'.
2. PART NAME _____
3. PART NUMBER _____
4. DRAWING NUMBER _____
5. BASE MATERIAL TYPE _____
6. RT PROCEDURE IDENTIFIED BY PERFORMING ACTIVITY, NUMBER _____, REVISION, AND DATE (AND ANY ADDENDA)
7. RT PERFORMANCE SPECIFICATION
8. FABRICATION SPECIFICATION

9. ACCEPTANCE CRITERIA