



Terms of Reference

for a rulemaking task

Specialised tasks

RMT.0275 (MDM.075) – ISSUE 1 – 19.11.2013

Applicability		Process map	
Affected regulations and decisions:	Part M, Part 145	Rulemaking lead:	R4 (See point 5, interface issues)
Affected stakeholders:	Member States, Maintenance organisations	Concept Paper:	No
Driver/origin:	Industry Request	Rulemaking group:	No
Reference:	Sub-SSCC Engineering and Maintenance Meeting, 25th May 2010.	RIA type:	Full
		Technical consultation during NPA drafting:	Yes
		Publication date of the NPA:	2016/Q1
		Duration of NPA consultation:	3 months
		Review group:	No
		Focussed consultation:	TBD
		Publication date of the Opinion:	2018/Q1
		Publication date of the Decision:	2019/Q3

1. Issue and reasoning for regulatory change

The concept of specialised tasks

Aircraft maintenance frequently involves performing a number of specialised tasks that are not necessarily related to the aircraft/engine/component type and for which the specific procedures and qualifications in relation to the specialised task are more relevant than procedures and qualifications with regard to a specific aircraft, engine or component.

Commission Regulation (EC) No 2042/2003 provides for the approval of maintenance organisations within the category D class rating, which is not linked to a specific aircraft, engine or component; however, this category is currently limited to D1 non-destructive testing (NDT) rating.

This means that under the current regulation, specialised tasks other than NDT should be performed under the aircraft, engine or component rating, either directly by the approved maintenance organisation or by a subcontracted organisation working under the quality system of the approved maintenance organisation (ref. 145.A.75 (b) or M.A.615 (b))

In both cases, the approved maintenance organisation should define, amongst other things:

- Qualification procedures for the personnel performing a specialised task (ref. 145.A.30(e))
- The facilities, tools, equipment and materials used for the performance of the specialised task (ref. 145.A.25 and 145.A.40)
- The maintenance data to be used (ref. 145.A.45)
- Procedures for release to service of aircraft or components undergone a maintenance specialised task (ref. 145.A.50)

Additionally, in the case of using a subcontracted organisation the approved maintenance organisation has to establish procedures to control the subcontracted organisation. These procedures should include audits to the organisations and inspection of the subcontracted work. Furthermore, the competent authority of the approved maintenance organisations has to include the subcontractors on the organisation's oversight programme.

It has also to be considered that when a subcontracted organisation serves several different approved maintenance organisations, it will be subject to the control procedures of all these different maintenance organisations and, therefore, several audits by the maintenance organisations and its competent authorities.

This represents a burden both on the subcontracted organisation, the maintenance organisation and the competent authority.

Allowing the subcontracted organisations to gain their own maintenance approval with the corresponding Dx rating will reduce the existing burden of audits.

There are many processes that could be classified as specialised tasks, Heat Treatment, Coating, Painting, Surface Enhancement and Material Testing to name a few, however, this rulemaking task will only consider the following specialised tasks:

- Welding – the principal consideration will be manual fusion welding although automated mechanised techniques as well as electrical resistance welding techniques may be reviewed.
- Composites repairs – the introduction of basic standards for the qualification of personnel embodying repairs to aircraft composite structure.
- NDT – review AMC M.A.606(f) and AMC 145.A.30(f) in particular considering where no Agency recognised National Aerospace NDT Board exists.

2. Objectives

Amend the regulation (Part 145 and part M subpart F) and AMC/GM to:

- define the scope and limits of welding and composite repairs as a specialised task and introduce appropriate subparagraphs to M.A.606 and 145.A.30, if necessary;
- define acceptable qualification standards for the performance of welding and composite repairs (AMC M.A.606(e) and (f), AMC 145.A.30(e) and (f));
- provide some guidance on procedures for monitoring of subcontracted organisations performing specialised tasks and for inspecting the subcontracted work (either on receipt or, when this is not possible, procedures to control the specialised task process) (AMC M.A.615(b), 145.A.75(b), AMC 145.A.75(b));
- provide some guidance on the release to service of specialised tasks under the A and B ratings (145.A.50);
- determine the equipment and tools required for the specialised task (M.A.608(a), AMC M.A. 608(a), 145.A.40, AMC 145.A.40(a));
- extend the class D approval rating for maintenance organisations to create a D2 rating for welding and a D3 rating for composite repairs;
- include certifying staff provisions for the Dx ratings (M.A.607(a), 145.A.35);
- provide release to service procedures under the Dx rating (145.A.50);
- review the concepts of line maintenance, base maintenance, necessary facilities and approved locations for organisations holding a Dx rating (M.A.604(b), M.A.605(a), 145.A.25(a), AMC 145.A.25(a), 145.A.75);
- consider alternative means of compliance to the use of NDT board as described in AMC 145.A.30(f); and
- provide guidance to competent authorities for the approval and oversight of maintenance organisations performing specialised tasks (either directly or using a subcontracted organisation)

3. Activities

During the development of the draft rules and the RIA, the following activity will be considered:

- Investigate the standards/methods currently in use by the approved maintenance organisations or recommended to be used by the competent authorities for welding and composite repairs for the qualification of personnel, use of specific tools, equipment and materials or process control.
- Liaise with partner regulatory bodies (FAA, CASA,...) on the future developments in the field of qualification of personnel performing specialised tasks.
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- Consultation with industrial experts in the applicable field (NDT, composites, welding).
- Liaise with CACRC on the status of development of industry standards for qualification of personnel performing composite repairs.
- There will be a preference to use/adopt internationally recognised industrial standards, where appropriate.

welding	AMS-STD-1595A 'Qualification of Aircraft, Missile and Aerospace Fusion Welders' SAE International (Cancelled 2002) AWS D17.1/D17.1M:2010 AMD1 'Specification For Fusion Welding For Aerospace Applications' American Welding Society
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	ISO 24394:2008+A1:2012 'Welding for aerospace applications. Qualification test for welders and welding operators. Fusion welding of metallic components' CAAP 33-1:2011 'Aircraft Manual Welding - Approvals and Qualifications' Australian Government Civil Aviation Safety Authority CAP 553 BCAR Section A Chapter A8-10 'Approval of Welders' UK Civil Aviation Authority
composites	FAA AC 65-33 'Development of Training/Qualification Programs for Composite Maintenance Technicians', FAA AC 145-6(Cancelled) 'Repair Stations for Composite and Bonded Aircraft Structure' Australia AC 66-4(0):2011 'Maintenance of Aircraft Composite Structures in a Maintenance Organisation' SAE AIR4938A:207 'Composite and Bonded Structure Technician/Specialist: Training Document' FAA AC 43-214 Repairs and Alterations to Composite and Bonded Aircraft Structure
NDT	EN 4179:2009 'Aerospace series – Qualification and approval of personnel for non-destructive testing' CAP 747 Section 2, Part 3, Generic Requirements GR No. 23 'Personnel Certification for Non-Destructive Testing of Aircraft, Engines, Components and Materials' UK Civil Aviation Authority EN ISO 9712:2012 'Non-destructive testing – Qualification and certification of NDT personnel (ISO 9712:2012)

4. Deliverables

- Develop an Opinion amending Part M and Part 145 to include new class D ratings and provisions for the approval of organisations in those ratings.
- Develop technical text for a Decision developing AMC/GM to Part M and Part 145 to provide guidance on procedures for the approval of such organisations.

5. Interface issues

This task is an Agency task, which the Agency has outsourced to UK CAA. This means that UK CAA will produce deliverables (NPA, CRD, Opinion, Decision) and recommendations for the Agency to adopt.

The impact of the amendment to Part 145 would need to be considered in the frame of the existing agreements between the USA and the EU on cooperation in the regulation of civil aviation safety and the agreement on civil aviation safety between Canada and the EU.

6. Focussed consultation

Depending on the result of the consultation of the NPA, the Agency may perform focussed consultation such as:

- RAG/TAGs and SSCC consultations (written or meetings);
- meetings with affected stakeholders.

7. Annex I: Reference documents

7.1. Affected regulations

Annex I (Part M) and Annex II (Part 145) to Commission Regulation (EC) No 2042/2003 of 20 November 2003¹ on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks.

7.2. Affected decisions

Decision 2003/19/RM of the Executive Director of the Agency of 28 November 2003² on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks

¹ OJ L 315, 28.11.2003, p. 1. Regulation as last amended by Commission Regulation (EE) No 127/2010 (OJ L 40, 13.02.2010, p. 4).

² http://www.easa.europa.eu/ws_prod/g/doc/Agency_Mesures/Certification_Spec/decision_ED_2003_19_RM.pdf