

Fire Extinguishing/Suppression Agent Quality Process

Transport Canada Study Update

Systems Working Group Meeting

Cologne. 22-23 May 2013

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Background

- **Instances of contaminated Halons (particularly in handheld extinguishers) installed on aeroplanes**
- **Questions re. adequacy of existing processes to assure that extinguishing/ suppression agents meet applicable purity standards**
- **ICAO recommendation for better oversight of the quality compliance of re-cycled Halons**

Study Objective



- **Broadly:**

Explore means to minimize the probability that ‘contaminated’ extinguishing/ suppression agents will be installed on aircraft

- **Specifically:**

Investigate the processes/procedures currently in use to control the quality of agents (in North America and Europe)

Study being conducted under contract to Transport Canada in partnership with FAA and UK CAA (in cooperation with EASA)

Status

Study completion expected June 2013

Information received from 38 organizations:

- Agent manufacturers
- Recycling organizations
- Test Laboratories
- Equipment/Component manufacturers
- Aircraft Manufacturers
- Maintenance/Repair/Overhaul organizations
- Operators
- Accreditation Organizations
- Trade associations



Some further input expected

Consideration



- **Extinguishing and suppression agents**
- **New and recycled agents**
- **Accidental as well as intentional non-compliance/contamination ‘opportunities’**
- **Minimising nugatory activities and regulatory burden**

Principal Recommendations

- **Agent Manufacturers and Recycling Organisations do not generally have Authority oversight.**
 - R: Agent Manufacturers and Agent Recycling Organisations should not be required to carry any specific authority accreditation.
 - R: Consideration should be given to the burden for quality control and assurance associated with agent passing to equipment/component manufacturers.

Principal Recommendations



- **Quality Control**

Effective quality control of the agent can only realistically be assured at point of insertion into extinguisher or component.

- R: Emphasis must be on a quality control obligation placed on the Equipment/Component Manufacturers.
- R: Agents should be treated as potentially contaminated up to the point of verification and certification of purity prior to insertion into the subject equipment/component.

Principal Recommendations

- **Bulk Holding and Batch Stock**

Some agent stock passed to equipment/component manufacturers is certified by reference to a larger holding of agent and not necessarily the specific batch container delivered.

- R: Review whether Test Certificates should be procured by the Equipment/Component Manufacturer from an accredited Test Laboratory for each batch of agent used.

Principal Recommendations



- **Test Laboratories***

Test Laboratories do not generally have Authority oversight.

- R: Test Laboratories and Technicians selected to take samples for analysis and test certification purposes should be accredited by or on behalf of the Authorities.

***Including approved in-house capabilities.**

Principal Recommendations



- **Equipment/Component Overhaul**

Overhauled equipment may not be subject to the same oversight/controls as that for new equipment.

- R: Equipment/component overhaul organisations should be subject to the same burden of quality control for assurance of agent purity as for the equipment/component manufacturer, including the procurement of test certification for the batch of agents used to refill equipment/components.

Principal Recommendations



- **Equipment/Component Overhaul**

Overhauled equipment may not be subject to the same oversight/controls as that for new equipment.

- R: Consider a requirement for an Airworthiness Release (FAA 8130-3) in US for overhauled fire extinguishing equipment/components, to ensure that the same controls are in place as those for new production items.
- R: Consider extension of UL (USA) oversight to cover surveillance of equipment/component overhaul activities.

**COOPERATION OF PARTICIPANTS
MUCH APPRECIATED**