TRAINING COURSE

UAS-ICAW - Initial and Continuing Airworthiness of Unmanned Aircraft Systems (UAS)

Introduction

The Initial Airworthiness (IAW) processes for the Classes of small UAS intended for the 'open' category of UAS operations and for the standard scenarios in the 'specific' category, are based on the EU 'new' and 'global' approach for the safety of industrial products, administered by industry and culminating in the CE mark and the Declaration of Conformity, based on Parliament Regulation 765/2008 [1], Commission Delegated Regulation 2019/945 [2] and related European Norms (EN) 4709-00X.

In the specific category requirements escalate from processes identical to the open category, to Design Verification and up to Type Certificate (TC) based on Part 21 and covering both the aircraft and the Control and Monitoring Unit (CMU).

The issuance of the TC leads to the individual Certificate of Airworthiness (CofA) and to requirements for Continuing Airworthiness on what shall be done (i.e. Part ML.UAS) under responsibility of a specific organisation (i.e. Part CAO.UAS) and under oversight by a competent authority (i.e. Part AR.UAS).

Similar processes, but with more stringent requirements, in particular for system safety assessment, apply to UAS, RPAS or VTOL Capable Aircraft (VCA) intended to be used in the certified category and possibly carrying humans on board.

The EU approach for IAW and CAW in the certified category is consistent with Annex 8 to the Chicago Convention, effective since 2021.

A package of five EU Regulations on type #3 (i.e. pilot on-board) certified operations was issued in 2024, covering inter alia IAW and CAW.

EASA has already published a number of special conditions [3], to facilitate the development of the certification basis, among which the system safety assessment (so called '1309') is the most relevant.

Furthermore, EASA has published several Means of Compliance (MoC) for design of UAS (e.g. at SAIL III in the

specific category).

JARUS has already published four airworthiness codes: CS-LURS, CS-LUAS, CS-UAS and CS-HAPS.

Specific equipment is necessary for UAS (e.g. geofencing, detect and avoid and Flight Termination System), for which Minimum Operational Performance Specifications are emerging from Standard Development Organisations (SDOs).

The course will provide an overview of the developments summarised above for IAW and CAW of UAS, RPAS and VCA, highlighting the differences with traditional aviation and suggesting how the airworthiness could be demonstrated for UAS of different configurations, MTOM and categories, in the context of the evolving regulations.

[1] Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93 (OJ L 218, 13.8.2008, p. 30)

[2] Commission Delegated Regulation (EU) 2019/945 of 12 March 2019 on unmanned aircraft systems and on third-country operators of unmanned aircraft systems, as lastly amended by Regulation 2024/1108 of 13 March 2024.

[3] https://www.easa.europa.eu/consultation-type/special-condition?search=RPAS&=Apply

COURSE DURATION

3 Days: 09:00 - 17:00 hrs.

TARGET GROUP

Target audience:

Middle managers, policy advisors, rulemaking officials and inspectors of CAAs needing knowledge and competency to apply the processes and specifications for initial airworthiness of UAS/RPAS based on provisions by ICAO, JARUS and also ISO and EU/EASA;

Middle managers, designers and aviation professionals desiring to receive detailed information on the international standards and rules applicable to airworthiness of non-military drones;

Authority or industry personnel involved in continuing airworthiness of unmanned aircraft and in installation and maintenance of the related pilot station.

Entrepreneurs involved in drone or drone equipment manufacturing and wishing to expand their activity by certifying or declaring conformity of respective products, including to export them to Europe.

Read more about the course Content, Learning Objectives and Pre-requisites on the website: www.jaato.com