EASA
European Aviation Safety Agency

FLYING IN THE EU:

UPDATE
2017

MAKING AIRWORTHINESS (SAFELY) AFFORDABLE

Background information

In the context of the EASA General Aviation Roadmap there is an effort to simplify the certification of aircraft and modifications. This should lead to a noticeable reduction in cost and effort to certify a new product or modify an existing one. In turn, this should enable manufactures to develop modern and safe products and operators to retrofit modern equipment at cost affordable to the pilots. There are three ways through which all the above will be achieved:

1. Simplified Airworthiness Procedures

2. Standard Changes and Repairs (CS-STAN)

3. CS-23/Part-23 reorganisation and International Harmonisation

Simplified Airworthiness Procedures

It is intended to drastically simplify the airworthiness system for the low end of GA with small aircraft and low risk operation by developing simplified entry levels into the EASA system. The basic principle is to apply a risk based approach and to use qualified entities and associations for oversight or practically combine organisational approvals, while relying on industry standards endorsed by EASA.

For these changes to happen, more flexibility for GA needs to be allowed in the Basic Regulation. Part-21 - which contains the airworthiness procedures - can only be changed when the Basic Regulation has been amended. In this process, EU Member States need to find an agreement that is expected in 2017. It will then take a number of years to change this set of rules (first the Basic Regulation and then Part-21).

EASA has therefore initiated a first quick-fix within the constraints of the current rule. This quick-fix will consist of dedicated Part-21 means of compliance for small companies accompanied by templates for manuals.

Experience has shown that it is particularly difficult for small companies to obtain a production organisation approval (POA). Therefore, new acceptable means of compliance (AMC) for small companies applying for a POA are developed. These AMC focus on showing that the actual produced aircraft, engine or propeller are in accordance with the approved design. There will be less procedures and organisational checks.

The plan is to have these dedicated AMC and templates for manuals available in 2017 and to start applying them in pilot cases.

In parallel, the concept for a drastically simplified airworthiness system will be developed and shared with our stakeholders when the Basic Regulation changes are in place.

The new Standard Changes / Standard Repairs (CS-STAN)

The concept of Standard Changes and Standard Repairs (CS-STAN) is another part of the Agency's efforts to reduce regulatory burden and encourage the installation of safety equipment.

For cases where the Agency acknowledges that there is little added value in a formal design approval process, CS-STAN allows modification and repairs without the need of approving a modification to the aircraft type design by the Agency or a 'Design Approved Organisation' (DOA). This is quite a radical simplification of the process and acknowledges competence and responsibility of the releasing maintenance staff.

CS-STAN is in place since July 2015 and allows, among others, the following changes

- to exchange one radio against another radio, or
- to substitute old engine indicators no longer available for new ones, or
- to renew seat upholstery of non-dynamic tested seats, etc.

without having to go through the formal process for approval.

The specific objective of CS-STAN is to create safe and cost-efficient Certification Specifications defining detailed acceptable methods, techniques and practices. This includes requirements for parts marking and instructions for continued airworthiness to serve as acceptable data for implementing standard changes and repairs to

- aeroplanes of 5 700 kg Maximum Take-Off Mass (MTOM) or less,
- rotorcraft of 3 175 kg MTOM or less,
- sailplanes, powered sailplanes, balloons and airships as defined in ELA1 or ELA2.

When using CS-STAN, the level of safety of the aircraft is considered to remain unchanged as long as acceptable methods are followed, and techniques proven by experience are used. Where necessary, additional limitations are given within the specific change/repair.

Next Steps after CS-STAN publication

Following the first step that contained over 20 Standard Changes and 2 Standard Repairs, feedback and suggested additions have been used to further expand the topics that can be addressed using this principle.

On December 2016, the Agency has published NPA 2016-17 for CS-STAN Issue 2 which is intended to:

- provide additional explanations on the use of CS-STAN,
- introduce 13 new standard changes and update 7 existing standard changes,
- introduce 2 standard repairs and update 1 existing standard repair.

CS-STAN will be further regularly amended on the basis of lessons learnt and proposals submitted by affected stakeholders, as well as industry technological innovations, which can bring safety benefits in a cost-efficient manner.

CS-23/Part-23 reorganisation and International Harmonisation

Although there is a lot of innovation and new technologies, these are rarely applied to new general aviation aeroplanes that are certified to CS-23/Part-23. Instead, micro-lights and US LSA aeroplanes, for example, do feature the latest technologies. As a consequence, certified general aviation is hardly renewing itself and is struggling to survive.

In order to revive certified general aviation, the Agency is participating in an international effort and cooperation with the FAA (and others) to reorganise the CS-23/Part-23 certification specifications.

The objective of this reorganisation of CS-23/Part-23 can be seen in two steps. First of all to change the structure of CS-23/Part-23 by:

- Separating the design aspects from the safety intent in the rules
- Consolidating the existing design specific requirements in new industry consensus standards
- Re-writing the safety objectives in a new CS-23/Part-23.

In the second step new technologies can be introduced in the new industry consensus standards. Of course, these new technologies do need to meet the safety objectives. A very important aspect of this reorganisation is that the new safety objective rules allow proportionality regarding the risks and differentiate in safety levels. The aim is to acknowledge that risks and safety levels for a basic two-seat aeroplane are not the same as for, i.e., a 19 passenger turbine powered aeroplane.

Where we are today

The FAA published their reorganisation of Part-23 (Amendment 64) late last year and EASA aims to publish the reorganised CS-23 in the first quarter of 2017. The supporting consensus standards are under development and are also expected to become available later this year. EASA will use an accelerated process to determine the acceptability of these consensus standards as detailed means of compliance and will publish the outcome this year. The intention is to start a number of pilot projects to further develop this new concept.

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