



**European Aviation Safety Agency**

## **EXPLANATORY NOTE**

### **EXECUTIVE SUMMARY**

This first issue of EASA Certification Specifications for helicopter flight simulation training devices (FSTDs) describes the requirements an FSTD has to comply with in order to achieve a certain level of qualification (initial qualification) and to maintain this level of qualification (recurrent qualification). FSTDs are evaluated according to the qualification basis, which describes the performance, handling qualities and documentation requirements of FSTDs and their compliance with the applicable processes for flight crew member training, testing and checking. The various types of FSTDs have to comply with different technical standards and pass different validation tests as well as functional and subjective tests. These are listed and explained in these CSs.

CS-FSTD(H) is based on JAR-FSTD H and JAR-FSTD temporary guidance leaflets (TGLs).

## **Certification Specifications for Helicopter Flight Simulation Training Devices (CS-FSTD(H))**

### **1. General**

#### **Background**

On 8 April 2008 Regulation (EC) No 216/2008 of 20 February 2008<sup>1</sup> (the 'Basic Regulation') entered into force. In addition, the Commission has adopted the necessary rules ('Commission Regulations') for the implementation of the Basic Regulation for the technical requirements and administrative procedures related to civil aviation aircrew<sup>2</sup>.

Pursuant to Article 18 of the Basic Regulation the European Aviation Safety Agency (the 'Agency') shall, where appropriate, issue Acceptable Means of Compliance (AMC) as well as Guidance Material (GM) for the application of the Basic Regulation and its Implementing Rules (IRs).

The purpose of the Comment Response Document (CRD) 2008-22e published on 1 December 2010 was to define the qualification code for helicopter Flight Simulation Training Devices (FSTDs). These CSs for helicopter FSTDs describe the requirements an FSTD has to comply with in order to achieve a certain level of qualification (initial qualification) and to maintain this level of qualification (recurrent qualification). FSTDs are evaluated according to the qualification basis, which describes the performance, handling qualities and documentation requirements of the FSTD's compliance with the applicable processes for flight crew member training, testing and checking. The various types of FSTDs have to comply with different technical standards and should pass different validation tests as well as functions and subjective tests. These are listed and explained in this document. CS-FSTD(H) is based on JAR-FSTD H and JAR-FSTD temporary guidance leaflets (TGLs).

#### **Agency measures**

CSs are used to demonstrate compliance with the Basic Regulation and its IRs.

AMC illustrate a means, but not the only means, by which a requirement of an IR can be met. Satisfactory demonstration of compliance using published AMC shall provide for presumption of compliance with the related requirement; it is a way to facilitate certification tasks for the applicant and the competent authority.

GM is issued by the Agency to assist in the understanding of the Basic Regulation, its IRs and CSs.

#### **Publication**

The full text of this CS is available on the Agency's [website](#).

For more information, contact the Agency at: [RPS@easa.europa.eu](mailto:RPS@easa.europa.eu).

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<sup>1</sup> Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. (OJ L 79, 19.03.2008, p. 1). Regulation as last amended by Regulation (EC) No 1108/2009 of the European Parliament and of the Council of 21 October 2009 (OJ L 309, 24.11.2009, p. 51).

<sup>2</sup> Commission Regulation (EU) 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 (OJ L 311, 25.11.2011).

## 2. Consultation on draft proposals

CSs are developed by the Agency, following a structured process as required by Article 52(1) of the Basic Regulation. Such a process has been adopted by the Agency's Management Board and is referred to as 'The Rulemaking Procedure'<sup>3</sup>.

The Executive Director Decision 2012/011/R adopts the initial issue of CS-FSTD(H) as an output of the following Agency rulemaking tasks:

Rulemaking Task No	TITLE	NPA/CRD No
<b>FCL.001</b>	<b>Implementing rules for pilot licensing</b>	<b>2008-22e</b>
<b>OPS.001</b>	<b>Implementing rules for air operations</b>	

The Notice of Proposed Amendment (NPA) and subsequent Comment Response Document (CRD) have been subject to consultation in accordance with Article 52 of the Basic Regulation and Article 15 of the Rulemaking Procedure established by the Management Board. For detailed information on the proposed changes and their justification, consult NPAs 2008-22b and 2009-02d<sup>4</sup>, which are available on the Agency's website.

The Agency has addressed and responded to the comments received on the NPA. The responses are contained in a Comment Response Document (CRD) that has been produced for NPA 2008-22e (cf. CRD to NPA 2008-22d 'CS-FSTD(H)'<sup>5</sup>) and that is also available on the Agency's website.

In response to the CRD to NPA 2008-22e, the Agency received **9** reactions. All reactions received after the publication of the CRDs were taken into consideration for the drafting of the present CS.

## 3. Summary of changes

The CRD reactions on CS-FSTD(H) lead to the following changes:

- (i) **AMC1-CS-FSTD(H).300** 'Qualification basis', Section 2.3 Table of FSTD validation tests, test 1.j.(1): the text in comment column has been changed from '...until the airspeed is clearly readable...' to '...at speeds below which airspeed is not clearly readable...' because the previous text erroneously considered the take-off case.
- (ii) **AMC1-CS-FSTD(H).300** 'Qualification basis', Section 2.3 Table of FSTD validation tests, test 5.b.(4): the requirement for surface contrast ratio is now 'not less than 5:1' for all FSTD equipped with a visual system. It has been '8:1' before for FTD and FNPT which was not compliant with the table of validation tests and with the requirements in CS-FSTD(A). The more restrictive requirement has been conveyed from the former JAR-STD 2H and 3H requirements. The change is supported by consultation of different experts for visual systems.
- (iii) Table 1 of **Appendix 8 to AMC1-CS-FSTD(A).300**: the requirement to have a 'complete fidelity of sounds and motion buffets' has been replaced by 'extended set of sound and motion buffet tests'. This change has been considered as necessary since the word 'complete' does not allow for any tolerance and made the requirement technically impossible.

<sup>3</sup> These CSs were developed in compliance with Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material ('Rulemaking Procedure'), EASA MB 08-2007, 13.6.2007. However, this Decision has been amended and replaced by EASA MB 01-2012, 13.03.2012.

<sup>4</sup> See Rulemaking Archive page: <http://www.easa.europa.eu/rulemaking/r-archives.php>.

<sup>5</sup> See Rulemaking Archive page: <http://www.easa.europa.eu/rulemaking/r-archives.php>.