Identification

Originator	Italy - ANSV	**SRIS Number**	IT.SIA-2017-0005
Addressee	International Organisations - EASA		
Headline	Unmanned helicopters to be equipped with automatic emergency recovery capability to reduce vertical velocity in case of engine malfunction during flight		

Filing Information

Local File Number	ANSV-3/518-16/1/A/17	**Source Type**	Occurrence
Status	Open	**Source Reference**	
Date Issued	2/23/2017	**Publication Format**	Final report
SR topics	Safety equipment	**Informed Parties**	

Recommendation Text

English text

In case of engine failure on a manned helicopter, the pilot would start an autorotation maneuver in order to decrease the vertical velocity. The unmanned helicopter under investigation was not equipped with an automatic system able to reduce the vertical velocity, lessening the effect of the ground impact. In this framework, it is important to highlight that the EASA document “Policy Statement, Airworthiness Certification of Unmanned Aircraft Systems (UAS) - E.Y013-01”, paragraph 7.1 “Emergency Recovery Capability”, states: «no mandatory airworthiness requirement to fit or configure systems to provide an emergency recovery capability».

Therefore, it is recommended to take into consideration the possibility that unmanned helicopters will have, as mandotory requirement, automatic emergency recovery capabilities able to reduce the vertical velocity acquired following an engine failure. This would consequently lessen the effect of the ground impact.

Original Text (Italian)

In condizioni analoghe di piantata motore su un elicottero manned, il pilota ai comandi avrebbe la possibilità di avviare una manovra di autorotazione, per limitare la velocità verticale di discesa. L'elicottero unmanned in questione non era provvisto di un dispositivo automatico che consentisse di contenere la velocità verticale di discesa e conseguentemente di ridurre gli effetti dell'impatto con il suolo. Al riguardo, va evidenziato che il "Policy Statement, Airworthiness Certification of Unmanned Aircraft Systems (UAS) - E.Y013-01"

dell'EASA, al paragrafo 7.1 "Emergency Recovery Capability", nell'indicare quali siano gli strumenti di solito utilizzati per consentire il salvataggio di un aeromobile unmanned in emergenza, precisa, però, quanto segue: "no mandatory airworthiness requirement to fit or configure systems to provide an emergency recovery capability".

Alla luce di quanto rappresentato nella predetta motivazione, si raccomanda di valutare la possibilità che gli elicotteri a pilotaggio remoto siano obbligatoriamente equipaggiati di dispositivi automatici (emergency recovery capability) che riescano a limitare la velocità verticale acquisita a seguito di una piantata motore, con conseguente riduzione degli effetti dell'impatto con il suolo.

Global Concern / Union-wide Relevance

SRGC/SRUR Global Concern (SRGC)
Union-wide Relevance (SRUR)

Response from International Organisations - EASA (received on 5/10/2017)

English Text

A new regulatory framework is currently being developed by the European commission and EASA to accommodate the operation of all Unmanned Aircraft (UA) in the EU.
The Agency published a Technical opinion (Opinion of a technical nature) in December 2015 which proposed a regulatory concept which is operation centric, proportionate, risk- and performance-based. It includes the establishment of three categories of UA operation (Open, Specific, Certified) which are based on the risk posed by the operation.
EASA Rulemaking task RMT.0230 started in 2016, and a ‘Prototype’ regulation for the ‘Open’ and ‘Specific’ categories was published in the summer; this will be followed by a concrete proposal in an NPA to be published 02Q2017.
More information is available on the EASA Website:
https:/www.easa.europa.eu/easa-and-you/civil-drones-rpas
The ‘Certified’ category will be subject of other NPAs to be published from end of 2017.
The safety risk associated with a UA falling onto third parties or properties is taken into account in the development of the regulations. The magnitude of the risk depends both on the type of operation performed and on the characteristics of the UA. Different means can be used to mitigate this risk, at operational and design levels, and for an unmanned helicopter an autorotation function is one of them.
Based on the principles explained above, EASA does not intend to mandate a prescriptive solution, rather it intends to require that operational risk assessments are conducted, and that adequate and proportionate

protection means are put in place to control these risks.
Closed- Partial agreement

Assessment by Italy - ANSV Response received awaiting assessment

Types of Drones