UAS Maintenance

Inhoudsopgave

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Current overlap

In Unmanned aviation there are three categories in wich an individual or entity can operate, being;

- Open
- Specific
- Certified

Current overlap - continued

There are currently no regulations in place for unmanned systems that operate in the open or specific categories.

There are rules in place to insure that the UAS have safety features that match the intended operational risk.

The risks for operations in the open and specific categories are not comparable to those of any operations in manned aviation. When planned operations come close to or exceed the risks that you see in manned aviation they get placed in the last category; certified.

About Certified;

Use of approved organisations or equipment — 'Certified' category

Certification will be required for operations with an associated higher risk due to the kind of operation, or might be requested on a voluntary basis by organisations providing services (such as remote piloting) or equipment (such as detect and avoid). When unmanned aviation risks rise to a level similar to that of normal manned aviation, the operation would be placed in the 'certified' category of operations. These operations and the unmanned aircraft involved therein would be treated in the classic aviation manner: multiple certificates would be issued (as for manned aviation) plus certificates specific to unmanned aircraft.

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Now and the future

The current texts for the certified category are already under revision at EASA.

The revised texts are expected to go 'live' in 2024, so in just two years. In these revised texts more attention is given to maintenance, UAM and provisions for semi autonomous and automated flights and airspace integration.

Proposed changes as seen bij EASA

3.3.7 Envisaged structure of the UAS regulation

A new **Delegated Act** will be established for the CAW requirements of the UAS operated in 'certified' category. It will include 6 Annexes:

- **Part-M.UAS**: continuing airworthiness standards (technical requirements) that the UA and CU shall satisfy

- **Part-145.UAS**: requirements for the organisation responsible for:
  - the maintenance of the UA;
  - the maintenance of UA components;
  - the maintenance of CU Core Layer components;
  - a combination of these.
- **Part-66.UA**: requirements for the obtention of licence necessary for the release of maintenance on the UA

- **Part-147.UAS**: requirements for the organisation providing training for the obtention of a Part-66.UA licence

- **Part-CUCS**: requirements to be met by the maintenance personnel authorised to release maintenance on the CU core layer (CU certifying staff)

- **Part-CAMO.UA**: requirements for the organisation responsible for the management of the UA continuing airworthiness

Proposed changes as seen bij EASA - continued

The way EASA proposes to integrate UAS maintenence for the certified category means that it's likely that those individuals and companies currently invested in maintenence for manned aviation will also be employed for the maintenence of UAS used in operations from the certified category.

Our expectations concerning maintenence

- In the near future bigger and complexer drones (those in the certified category) will be monitored and managed as you do all assets.

- We expect that predictive maintenance based on data and sensors will have impact on the design of maintenance programmes for these kinds of assets (and the required skillset of maintenence personel).

- Despite smarter monitoring and management: Corrective maintenance will always be needed.

- Preventative maintenance will be more and more data (and sensor) driven to optimize the combination of reliability and returns

- Digital Twins will become the norm for easy and guided maintenance and improved monitoring of fleets of vehicles.

What do you
think?

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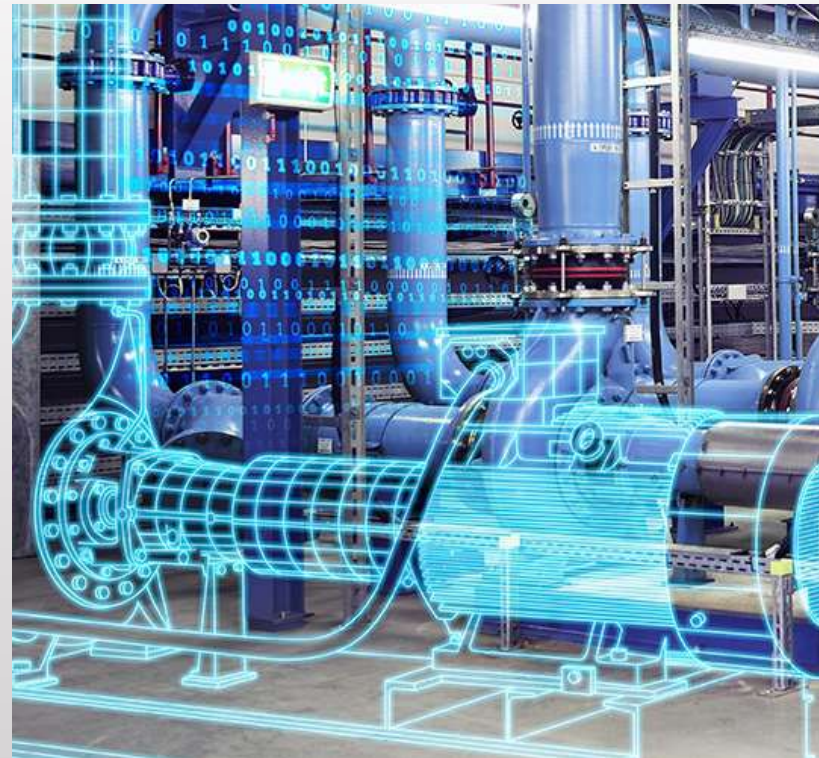
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Any Questions?