



The study will carry on the “Airworthiness” aspect (initial certification or keeping of airworthiness by maintenance) of the suborbital aircraft “A-towards-A” (take-off and landing take place at the same location) and their engines.

The IAASS (International Association for the Advancement off Space Safety) also produced draft standards for space transport, and recommends for example levels of safety sufficient for the inhabited suborbital operations, with a probability of event catastrophic which should not exceed $1 \cdot 10^{-4}$ (1 operation out of 10,000). Being a question of initial certification, it will act to imagine either the broad outline of a specific “Code of Certification” or of the amendments necessary to adapt the existing certification rules in the civil aviation (e.g. AESA or FAA).

Address one of the following topics by putting forward specificities of the suborbital vehicles compared to aviation (e.g. undergone acceleration, management of centre of gravity, possible thermal protections, insulation of the propellant tanks):

1.

To imagine the broad outline of a specific “Code of certification” dedicated to the suborbital vehicles,

2.

To adapt the initial certification rules for suborbital planes bases, taking as a starting point certain current rules (e.g. AESA CS-23 “To commute aeroplane”, Broad CS-25 “aeroplanes”),

3.


To propose certification rules for the “rocket engine” (if necessary by taking as a starting point AESA CS-E “Engines” rules),

4.

To consider rules of keeping airworthiness through maintenance operations for suborbital planes.



General characteristics for the reference vehicle:

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