



The study will carry on the “Airworthiness” aspect (initial certification or keeping of airworthiness by maintenance) of suborbital aircraft, either type 1 (for local flights) or type 2 (high-speed long-range transportation) and their engines.

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).

You will 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 type 1 or type 2 vehicles, taking certain current rules (e.g. AESA CS-23 “Normal, Utility, Aerobatic and Commuter Aeroplanes”, AESA CS-25 "Large Aeroplanes") as a starting point. Operations are also taking into account. In a second step, imagine outlines of a specific "Product Certification Code" dedicated to suborbital vehicles, then focus on a Part you choose. Consider the corresponding rules for keeping airworthiness through maintenance operations.

Or

2.

To propose certification rules for the “rocket engine” (if necessary by taking as a starting point AESA CS-E “Engines” rules). Consider the corresponding rules for keeping airworthiness through maintenance operations.



General characteristics of reference vehicles:

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