

THE ARIANE 6 TRANSPORTER OF THE CENTRAL CORE (TCC)

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Abstract:

In the Launcher Assembly Building (BAL), the Ariane 6 Transporter is taking care of the Central Core (CC) consisting of the Lower Liquid Propulsion Module (LLPM) and the Upper Liquid Propulsion Module (ULPM)

It is in charge of transferring the CC from one assembly line to the other inside the BAL, then from the BAL to the Launch Pad (ZL) and finally to raise the CC together with the crane of the mobile gantry.

The system comprises two automated guided vehicles (AGV) on which are mounted two cradles to support horizontally the CC.

These two AGVs are synchronized but they are not connected in order to be able to use them separately for additional operations like during the extraction of the modules from their transport containers.

The system has been designed to avoid any loads transfer in the CC during the operations between the BAL and the ZL and during the CC raising in the mobile gantry.

APCO Technologies used its European chain supply to produce the different subsystems. The subassemblies were integrated in the Aigle premises in Switzerland and a full test campaign has been conducted.

Then, the machine has been fully dismantled, transported to the Centre Spatial Guyanais (CSG) where it has been reassembled. At the CSG, the test campaign has been realised using a CC mockup to perform the complete transfer and raising sequences.

The TCC is now ready for the Ariane 6 maiden flight which is coming soon.