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SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
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THERMAL AND FUNCTIONAL SOLUTIONS AND TECHNOLOGIES FOR FUTURE LAUNCHER
CRYOGENIC PROPULSION MODULES

Abstract

The minimization of the recurring cost is the major criteria to fulfil for the next generation Launchers and then for the Equipped and insulated tanks of cryogenic stages.

This paper will present an overview of the main thermal and functional components and technologies applicable for the cryogenic propulsion modules. Different alternatives will be presented taking into account the historical experience and flight proven solutions or alternative technologies under maturation if they contribute to the cost-reduction main objective.

Some solutions have to be compatible with the re-ignition capabilities and then the long ballistic phase of the cryogenic upper stage.