

QUALITY ASSURANCE CHALLENGES DURING REALISATION OF REUSABLE LAUNCH VEHICLE

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Abstract

Quality Assurance (QA) of any launch vehicle system requires proactive involvement of QA engineer during all phases of the product life cycle starting from conceptual design, design finalisation, product realisation, and qualification till certification for flight. This paper highlights the major challenges faced by Quality Assurance teams during various phases of realisation of Reusable Launch Vehicle-Technology Demonstrator (RLV-TD) in the areas of Mechanical systems, Avionics systems, Software and Thermal Protection Systems. This paper also addresses the vital role played by the Quality Assurance process in bringing out major issues faced during flight realisation, the lessons learned and the corrective actions implemented.

Keywords : Quality Assurance, RLV-TD, Validation, Verification, Avionics, Control, Thermal, Software