ऐरोस्पेस प्रभाग हिन्दुस्तान एरोनाटिक्स लिमिटेड पोस्ट बैग नं. 7502 न्यू तिष्पसंद्रा पोस्ट बेंगलूह - 560 075. भारत.



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## Aerospace Division of HAL- Brief Profile and Core Capabilities

The Indian Space Research Organization (ISRO), Department of Space, Government of India has entered into a long-term Co-operation Agreement with HAL through a Memorandum Of Understanding dated 20<sup>th</sup>May 1983.

As per the agreement, Aerospace Division of HAL was established to fabricate light alloy Structures and Tankages for Satellite Launch Vehicles & Spacecraft related programmes for supplies to VSSC, LPSC and URSC.

Today this unique Division of HAL supports all the major and challenging space programs of India. It is a premier manufacturer and integrator of Indian satellite launch vehicles and satellite structures.

Aerospace Division of HAL is spread over 53 Acres of land with an investment of Rs. 400 Crores in terms of buildings, plant & machineries for production of various Launch Vehicle Hardware, Integration and Cryogenic Rocket Engines.

The Division brings under one roof activities ranging from methodizing, high-tech tooling, precision machining, welding, complex riveted & welded assemblies, Satellite Bus Structures, Mechanical & Electrical Integration activities for Booster rockets and quality assurance.

The Division's strength lies in its team of highly motivated and technically qualified engineers & trained personnel involved in realisation of:

- 🖕 Space Launch Vehicle Structure & Propellant Tankages
- 💺 Satellite Structures
- Stage Integration & Equipping
- ፋ Cryo & Semi-Cryo Engine Modules
- End-to-End PSLV Productionisation

Aerospace Division is an AS9100D certified company and also possess ISO 14001:2015 certification for environmental management, ISO 45001:2018 occupational Health & Safety Management system & ISO 27001:2013 IT security.

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Of the many facilities, The **Welding facility of the Division** is unique, with TIG facilities to carryout Circular welding, Meridian Welding, Rotary Welding and Longitudinal-Welding to produce large light alloy propellant tanks of diameter upto 4000 mm and 15 meters in length. Friction stir welding, the latest in welding technology is also available. All the processes are carried out under controlled conditions of temperature and humidity & in a totally dust free environment.

The division has got the facility for stage integration of booster rockets involving structures and propellant tanks, engine, plumbing lines, functional modules & electrical looms. The division is also having facility for Global leak checks, Functional checks, Flow tests, Cold Gimballing test and computerised check out



and telemetry system to check all the functions & parameters of the stage. It has got extensive facility for proof pressure test up to 345 bars pressure and a clean tent of 10,000 class.

The Integrated **Cryogenic Engine Manufacturing Facility (ICMF)** at HAL Aerospace Division was inaugurated by **The Honourable President of India, Smt Droupadi Murmu** on September 27, 2022. The facility will cater to the entire Rocket Engine Manufacturing under one roof for ISRO. The facility will boost self-reliance in manufacturing of Hi-thrust Rocket engines. The facility is set up over an area of 4500 sqmts housing over 70 hi-tech equipment and testing facilities for manufacturing Cryogenic (CE20) and Semi-cryogenic (SE2000) Engines of Indian Space Launch Vehicles.

Aerospace Division of HAL will play an important role in all the future space missions of ISRO.