

LIQUID PROPULSION SYSTEMS CENTRE

GENESIS

The formation of **Auxiliary Propulsion Systems Unit (APSU)** was in 1981, with Dr. A.E. Muthunayagam as the Programme Director. APSU was established by merging all the control systems and component development activities at Propulsion Group of VSSC with Pressure Transducer Unit (PTU). Thus all auxiliary propulsion activities came under an independent unit of ISRO. Prof. U.R. Rao was made the Chairman of the APSU council along with Dr. A.E. Muthunayagam and the then Director, VSSC as the members of the council for formulating the policies & other related matters.

Liquid propulsion development was understood to be absolutely essential for future ISRO missions, and to have focused research and development in this critical domain, and also consolidate on the giant leap made in the SEP technology acquisition, **Liquid Propulsion Project (LPP)**, was constituted by Chairman, ISRO in **December 15, 1980** with Dr. A.E. Muthunayagam as Director.

In order to consolidate the expertise and resources already existing in ISRO/DOS in the area of liquid propulsion for their effective deployment in various launch vehicle and satellite development, and for gearing up for the development of cryogenic engine & stage in an optimum manner, the Liquid Propulsion Projects (LPP) along with its activities and personnel were merged with the Auxiliary propulsion unit (APSU) forming the **Liquid Propulsion Systems Unit (LPSU)**, as an independent unit of ISRO. The LPSU was thus formed on **30th November, 1985**.

As the liquid propulsion activities grew up in stature and with multiple projects in both launch vehicle and spacecraft areas, the Liquid Propulsion systems Unit was elevated as **Liquid Propulsion Systems Centre (LPSC)** on **15th May, 1987** with 3 units with LPSC, Valiamala (Trivandrum, Kerala) as Headquarters, LPSC, Mahendragiri (Tamilnadu), and LPSC, Bangalore (Karnataka).

LPSC, Mahendragiri had the responsibility of assembly, integration and testing of liquid propulsion engines & stages along with subsystems. It also had propellant storage facilities as well as an Integrated liquid hydrogen plant (ILHP). As the activities grew in stature, in order to have better management control and focus on assembly, integration and testing activities, LPSC, Mahendragiri was made as an independent complex of ISRO and renamed as **ISRO Propulsion Complex (IPRC)** on **1st February, 2014**.

Liquid Propulsion Systems Centre as a Centre is having key responsibilities including Propulsion System Development for the prestigious Gaganyaan Program and upcoming major missions like Chandrayaan – 4 sample return mission, Venus Mission, Bharthiya Anthariksh Station, Next Generation Launch Vehicle etc.