Source : www.pib.nic.in Date : 2018-12-21

REUSABLE ROCKET TECHNOLOGY

Relevant for: Science & Technology | Topic: Space Technology & related matters

Department of Space

Reusable Rocket Technology

Posted On: 19 DEC 2018 6:45PM by PIB Delhi

ISRO is working on reusable technology for reducing the cost of access to space including the development of a winged body unmanned reusable launch vehicle for launching payloads into low earth orbits.

ISRO has successfully developed a scaled down (1:5) technology demonstration version of Reusable Launch Vehicle – Technology Demonstrator (RLV-TD) vehicle and successfully carried out the first experimental mission on May 23, 2016 from Satish Dhawan Space Centre, Sriharikota. In this mission, critical technologies such as autonomous navigation, guidance & control and reusable thermal protection system have been successfully demonstrated.

Development of Reusable Launch Vehicles is a technical challenge and it involves the development of many cutting edge technologies. A series of technology demonstration missions would be required to validate these technologies. In the next phase, an autonomous runway landing experiment is planned releasing the RLV-TD vehicle from a helicopter to demonstrate the runway approach and landing capability. This will be followed by an end-to-end orbital re-entry mission demonstration using a Technology Demonstration Vehicle boosted by propulsion systems.

ISRO has undertaken the development & qualification of Semi-Cryogenic engine. Further development activities are planned to realise a Semi-cryogenic stage and uprated version of the high thrust GSLV Mk III cryogenic stage, in order to increase the payload capacity of GSLV Mk III from 4 tonnes to 6.5 tonnes.

This was stated by the Minister of State in Ministry of Personnel, PG & Pension, Dr. Jitendra Singh in a written reply to question in the Lok Sabha today.

****

BB/ NK/AK/1398

(Release ID: 1556702)

END