

L&T Press Release

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DRDO and L&T join hands for Realisation of Indigenous Air Independent Propulsion (AIP) System for Submarines of Indian Navy

Mumbai, Jun 22, 2023: Larsen & Toubro and DRDO signed a contract for realisation of two Air Independent Propulsion (AIP) System Modules for Kalvari Class of Submarines of the Indian Navy. The contract documents were exchanged between Shri Arun T Ramchandani, Executive Vice President and Head-L&T Defence and Shri. PT Rojatkhar, Director - Naval Materials Research Laboratory (NMRL) in the presence of Shri J D Patil, Member of Executive Committee of Management and Advisor (Defence & Smart Technologies) to CEO & MD Larsen & Toubro Limited & Senior officials from NMRL and L&T.

These Modules constitute the core of the fuel cell based AIP System, indigenously developed by Naval Materials Research Laboratory (NMRL) of DRDO with L&T as prime industry partner, an association spanning more than a decade. The Energy Modules (EMs) comprising Fuel Cells produce the required power, along with on-board Hydrogen generation. The technology of this indigenous AIP system is a unique one that generates hydrogen on demand thereby obviating the need for carrying hydrogen onboard which is a major safety concern for a submarine. On realisation and integration of these modules in the submarines, India will join an elite club of a handful of nations who have indigenously developed fuel cell based submarine AIP technology which is critical for increasing the endurance of conventional submarines. It is pertinent to mention here that principally this technology is a green one since the by-product of the reaction is non-polluted water which can be released into the oceans.

Commenting on the development, Shri Arun Ramchandani said, “We are proud to be the longest serving development partner to DRDO across programs in multiple domains. L&T is privileged to be associated with accomplishing the dream of realising an indigenous AIP system and mark India’s joining a select group of few nations who have developed the requisite technology . Our commitment to nation-building continues to be as strong as ever and establishes yet another milestone in our journey to fulfil India’s aspirations to become Atmanirbhar in critical technologies”

L&T is the recipient of Transfer of Technology (ToT) for this DRDO developed AIP System. The Transfer of Technology documents for the same were handed over to Mr Patil by the Hon’ble Raksha Mantri Shri Rajnath Singh in presence of Chief of Defence Staff and Navy Chief during Aero India 2021 In Bangalore.

The manufacturing, integration and factory acceptance trials of the EMs will be undertaken in L&T's AM Naik Heavy Engineering Complex at Surat. State-of-the-art infrastructure, best practices at L&T and cutting-edge technology will ensure requisite quality and on-time delivery. The EMs will be supplied for integration into the AIP Plug that will be retrofitted into the submarine.

This project would pave the way for order(s) for AIP Systems for the remaining five Kalvari Class submarines in the coming years. This could also open up possible export opportunities to other countries that operate Scorpene class submarines.

Background:

Larsen & Toubro is a USD 23 billion Indian multinational engaged in EPC Projects, Hi-Tech Manufacturing and Services. It operates in over 50 countries worldwide. A strong, customer-focused approach and the constant quest for top-class quality have enabled L&T to attain and sustain leadership in its major lines of business for eight decades.

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