

Project 75 India:

A new era of submarine warfare

In the quest of becoming a twenty first century blue water navy, India has taken a number of initiatives to exponentially expand its naval assets. This can only be successful with a powerful fleet of modern submarines, a large fleet of which will not only protect Indian interests in the Bay of Bengal, Indian Oceanic Region and the Arabian Sea but maintain dominance from the Malacca Strait or beyond to the East Coast of Africa, assuring India's security.

In 1997, the Ministry of Defence approved a plan to acquire 24 submarines under Project 75. Later the plan was changed and along with a new refurbished Project 75, the new Project 75I (for India) was initiated, the aim being to establish two production lines to build twelve boats using transfer of technology from different foreign manufacturers. Submarines to be built under P-75I will be more advanced than the *Kalvari*-class submarines currently being manufactured under the P-75, and will be equipped with air-independent-propulsion (AIP) allowing much longer under water endurance also featuring vertical launch system enabling launch of land attack cruise missiles.

In October 2014, the Defence Acquisition Council cleared the P-75I with an approved budget of Rs. 53,000 crore.

State-owned Mazagon Dock, Hindustan Shipyard and Cochin Shipyard, privately owned Larsen & Toubro and Pipavav Shipyard have been shortlisted to bid for the project in collaboration with a foreign shipyard.

According to latest reports following are the likely contenders for the project:

Russia

According to reports, Russia has indicated an undisclosed system based on the *Amur* 1650 as an official contender for the multi-billion dollar project. The *Amur* 1650 is an export version of the Project 677 *Lada*-class submarine whose latest unit, the *Kronshtadt* was recently been inducted in the Russian Navy and four more units are likely to be commissioned. The fourth generation diesel-electric submarine with future fifth generation *Kalina*-class will bolster the conventional submarine fleet of Russian Navy. *Amur*-class from Rubin Central Design Bureau has been developed mainly for exports, essentially to India or China. Rubin's parent company United Ship Corporation is offering this in partnership with an Indian company.

Deputy Director General for foreign activities of Rubin Design Bureau, Andrei Baranov said that the *Amur* 1650 is an

advanced conventional submarine capable of fulfilling any mission required from this class of submarines "whereas P75I is an Indian specific submarine, with its own particular requirements and it is therefore another project." However, the prototype for this would be the *Amur* 1650, with displacement of 1650 tonnes when surfaced, a length of 66.7 meters, range of 6000 km and endurance of 45 days.

Germany

According to reports, Thyssen Krupp Marine Systems (TKMS) is offering six *Invincible*-class submarines. The *Invincible*-class or Type 218 is built by Howaldtswerke-Deutsche Werft (HDW) and is the latest conventional platform from Germany, with Singapore as first customer of the type. The 75m long submarine has a surface displacement of 2200 tonnes and an endurance of 84 days, and believed by some experts to feature the Li-Ion battery as well. The previous offer from TKMS was for the Type-214 (an export variant of Type 212).

As TKMS India Managing Director Gurnad Sodhi stated, "Virtually no shipyard in the world has more experience in designing and constructing conventional submarines than does TKMS Business Unit HDW". While praising its anti-surface and



Developed by Russia's Rubin is the *Amur* 1650 submarine