



The Baltic Connection

Vayu's Angad Singh visited a number of Russian shipyards on the Baltic Sea, reporting on several key programmes relevant both to India and the broader Russian shipbuilding industry.

Goa is a popular tourist destination in India, particularly among Russian travellers, so it was not surprising to hear that Yantar Shipyard's General Director, Eduard Efimov, was enthused at the possibility of co-operating with Goa Shipyard Limited (GSL) on production of frigates for the Indian Navy. In an exclusive interaction with *Vayu* at Yantar, in the strategic Russian exclave of Kaliningrad, he spoke at length about the work his shipyard has already done with the Indian Navy, and shared details about the proposed deal for four new warships.

"Discussions are being held," said Efimov, "and we do hope that by the end of this year we have some clarity [on this order]."

Yantar has built the second batch of three *Talwar*-class frigates for the Indian Navy : *INS Teg*, *Tarkash* and *Trikand*, distinguished by their primary armament of BrahMos cruise missiles in place of 3M54

Klub missiles on the first three ships, and AK630 close-in weapon systems instead of the larger Kashtan CIWS. These vessels are significantly modified variants of the venerable Soviet-era *Krivak*-class frigates, and the Russian MoD was sufficiently convinced of their utility to order a six-ship run of frigates based on the *Talwar*-class.

Produced under Project 11356R/M (Russian/Modernised), the class is named for the lead ship, *Admiral Grigorovich*, differing only slightly from the Indian boats with two 12-cell vertical launchers for its 3S90 Shtil surface-to-air missiles instead of the older single-arm trainable launcher that is incapable of rapid firing. Crucially, the Russian frigates have retained the same gas turbine powerplant, supplied by Ukraine's Zorya Mashproekt. The first vessel was laid down in December 2010 at Yantar, and by the time the Ukrainian crisis had boiled over into the annexation of Crimea by Russia, construction of five of the six boats

was in full swing. However, only three sets of engines had been delivered by that time, and Ukraine's embargo then left Yantar and the Russian MoD with three frigates under construction without any realistic hope of getting powerplants.

While an ambitious import substitution programme was put in place across all sectors of Russian industry, it became rapidly clear that it would be quite some time before Russia's turbine manufacturers would be able to duplicate the Zorya powerplant for the *Grigorovich*-class vessels. The Russian government elected to find a buyer for these vessels, one that Ukraine would be amenable to doing business with. India was the natural first choice as an existing operator of the type, and on the sidelines of the BRICS summit at Goa in October 2016, the two nations announced an agreement on four *Grigorovich*-class frigates in addition to a multitude of other procurements (see *Vayu VII/2016*).