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DEFENCE ■ DIPLOMACY ■ SECURITY

THURSDAY 12, APRIL 2018

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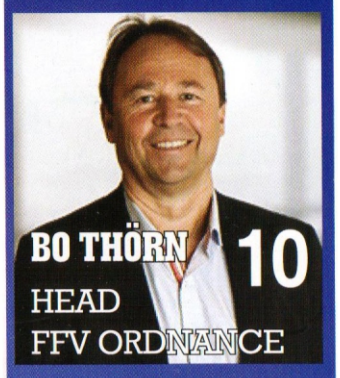
French Ambassador

IGOR SEVASTIANOV
Deputy Director Rosoboronexport

PRAVEEN MOHAN
Director & CEO MTU India

BABA KALYANI
CMD, BHARAT FORGE



VLADIMIR DOROFEEV 12
CEO
MALACHITE DESIGN BUREAU

NO WORRIES: RM

'Make in India' will not come in the way of forces' procuring vital foreign arms

- Resources are not a problem for India's defence preparedness. Of the total capital expenditure in this year's budgetary proposals (2018-19), 33 per cent will be spent on defence.
- The three services have been given complete autonomy to buy what they consider to be essential arms and ammunitions. The Ministry does not interfere in this decision.
- There has been a consistent endeavour to avoid delays in procuring weapons systems. Many procuring orders have been issued in the last four years on those weapons systems, decisions over which were pending for decades.
- While 'Make in India' remains the cherished goal towards self-reliance in the defence sector, the government will not prevail upon the forces to abandon using and procuring foreign arms and weapons altogether. The government will respect the decisions of the three services if and when they think that a particular foreign system is in their best interest. "It is their Final Call".

These were the four important themes that were highlighted by Defence Minister Nirmala Sitharaman and her team comprising Minister of State for Defence Dr Subhash Bhamre, Defence Secretary Sanjay Mitra, Secretary - Defence Production Ajay Kumar and Chairman of the Defence Research and Development (DRDO), S Christopher, during their interaction with the Press on the opening day of the 10th DefExpo at Kancheepuram, near Chennai.

Highlighting how this edition of the DefExpo was different from the previous ones, Seetharaman pointed out that this time special care had been taken to project India on its path to emerge as a major hub of manufacturing of Defence Systems in the world by 2025. "India may be one of the largest importers of the world, but in the process we have developed the capacity to manufacture arms that can be exported. Our Defence PSUs have patented products under the leadership of the DRDO that can be exported. Special care has been taken that this DefExpo is the forum where the Indian companies can proudly display their products. It is a conscious decision to give them greater space."

In this regard, Secretary - Defence Production Ajay Kumar said how against the government's decision of reserving 50 per cent of the space for Indian exhibitors, the response had been as high as 75 per cent, with many Medium and Small Scale Industries (MSME) participating

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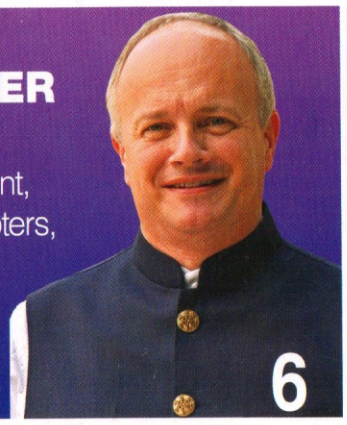


XAVIER HAY
President, Helicopters, Airbus India

RADM SHEKHAR MITAL, NM, IN(RETD)
CMD, Goa Shipyard Limited (GSL)

EDUARD KAPPES
Regional Sales Manager (Navy) Rohde & Schwarz GmbH & Co. KG

COMMODORE RAKESH ANAND (RETD)
CMD, Mazagon Dock Shipbuilders Limited

"The Piranha-T is cheap and deadly"

Malachite Design Bureau, St. Petersburg is pushing mini-submarines 'Piranha' for export. The bureau views the project as shallow-water ships with well-priced production and operation. A number of 220-950-tonner 'Piranha' family submarines capable of carrying torpedoes, missiles and mines have been developed. **VLADIMIR DOROFEEV**, CEO, Malachite Design Bureau tells about 'Piranha's evolution and other works carried out by his company

Malachite has presented a new project 'Piranha-T' model at the exhibition. How does it differ from Project 865?

'Piranhas' were built at the 'Admiralty shipyards' in Saint Petersburg and operated by the Russian Navy. 'Piranha-T' has small differences in size but much better performance. With the similar size it has increased displacement (up to 500t), operational range (up to 2000 miles), propelling motor power (up to 250kW) and twice increased full speed (up to 12 knots). The submarine endurance is 20 days.

The submarine is designed to operate in inshore and shallow waters such as the Caspian Sea. We offer our would-be customers a family of ships with standardized equipment and electronic warfare systems installed on small 250-300-tonners and big 1,000t-heavy submarines.

The priority tasks of 'Piranha-T' are inshore defence, discovery of underwater situation, fight against terrorist threats, offensive mining as well as landing of special force teams (up to six combat divers). 'Piranha-T'is armed with two torpedo tubes. It can carry two missiles or 533mm torpedoes, eight 400mm torpedoes and four mines. These weapons can be effectively used in areas where a submarine must be invisible in acoustic and electromagnetic terms. The submarine team may include from three to five persons. 'Piranha' is equipped with a special airlock chamber. Divers can covertly escape the chamber of a submarine moored with underwater anchor. The divers take weapons and equipment placed in external packages and start performing their tasks. The team returns to the submarine in the same way.

Who do you consider as would-be customers?

'Piranha-T' may be viewed as a rather cheap submarine. It can be purchased by countries which have offshore hydrocarbon fields to be protected. We see interest from a number of countries.

This year Malachite marks its 70th anniversary. Which main projects established within its work period would you like to draw attention to?

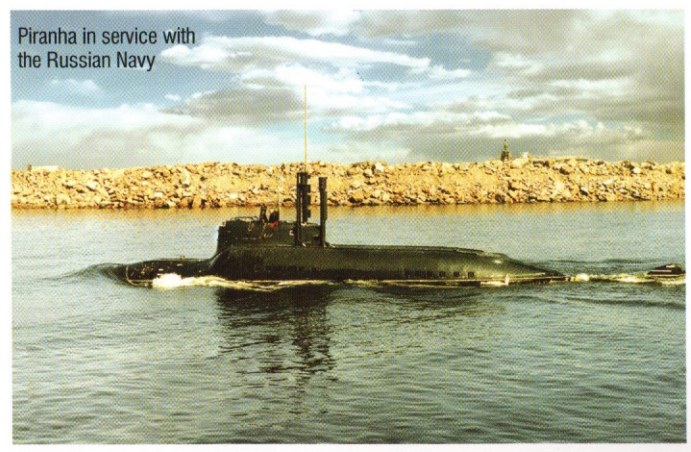
Malachite developed the first Russian nuclear submarine, many other multi-purpose and missile submarines as well as deep-water and oceaneering equipment. Our design bureau has been always having both feet on the floor, looking forward and designing innovative ships. Among them were titanium nuclear submarines, the fastest nuclear Project 661 'Anchar' so-called 'Golden Fish' which set up a world record for underwater speed of 44.7 knots (82.695km/h); also highly automated anti-submarine nuclear Project 705 'Lira' submarines carrying liquid-metal-cooled reactors. The most advanced components of the design were installed into the projects of the third and fourth generation fast-attack submarines. We also made research submarines and deep-submerged vehicle called 'Rus' capable of going as deep as 6km.

How do you see the perspectives of underwater shipbuilding development?

We should objectively consider the way of elaborating submarines not just in terms of traditional speed, depth, team strength but providing them with definitely different combat qualities such as being network centric and capability of coordinated use of submarines together with surface ships, aircraft and spacecraft. Besides, submarines must remain stealthy. Making submarines network-centric without sacrificing their stealth performance is nowadays a significant research and technology task.

What are you doing to improve your submarines in terms of stealth operation?

Stealthiness is a comprehensive concept which includes primary and secondary field concealment. Primary fields are about acoustic discretion which involves noise sent by a submarine itself. We apply higher requirements as to components to fit higher noise level standards. The same requirements are made in searching for new types of propulsion systems. Not less important is secondary field concealment. Such fields are created during hydroacoustic illumination. This task can be implemented by means of individual selection of an architecture and design type and use of special hull coverings to significantly reduce echo values. The lower the illumination rate is the thicker the covering should be. It involves only the wave length the covering is designed for.



Piranha in service with the Russian Navy

What is the anti-hydroacoustic equipment is used in your submarines?

Without commenting on whether such equipment is available or unavailable on our ships, let's refer to foreign experience. According to public media reports, we may clearly trace the trend of making such equipment by the USA and UK. Thus, the equipment is capable of distorting a ship's sonic field to protect it against detection. I believe there is the same trend in progress in our country.

Are robotised unmanned submarines being now designed or will be designed in the future?

The concept of the future underwater fleet involves combination of manned and unmanned vehicles supplementing each other to increase effectiveness of operation of the whole battle system. Unmanned vehicle is definitely not a goal itself. Such vehicles' tasks include search and undoing submarines, surface ships, as well as protection of its own water areas. They will amplify manned submarines' capabilities outperforming common tasks.

Does Malachite design vehicles to protect oil platforms?

Yes, we are engaged in it, too among other activities.

Boeing Apache, Chinook: On schedule for 2019 delivery

India has significantly advanced its attack and heavy lift helicopter capabilities to enable a range of military and humanitarian missions by selecting Boeing's AH-64E Apache and CH-47 Chinook. The Ministry of Defence had finalised its order with Boeing for production, training and support of 22 AH-64E Apache attack helicopters and 15 CH-47F Chinook heavy-lift helicopters in September 2015.

Bradley Rounding of the Vertical Lift Global Sales and Marketing team at Boeing Defense, Space and Security, briefed Geopolitics about Boeing's vertical lift business and how the Apache and Chinook would be best suited for the Indian Air Force's requirements.

"With the selection of the AH-64E, the dominant force projection capabilities of the Indian Air Force will be enhanced considerably," Rounding said. "The Chinook has unsurpassed ability to deliver heavy payloads to high altitudes, and is eminently suitable for operations in the high Himalayas. The aircraft has been battle-tested in diverse extreme conditions throughout the world, and has proven capability to operate in the wide range of conditions that typify the Indian subcontinent."

The Apache has been flown or selected for acquisition by the United States and 15 other nations, including India. The Apache and Chinook represent the best of high-performing technologies that will modernise India's defense capabilities and will greatly enhance the country's capabilities across a range of military and humanitarian missions. Both are the newest models of those aircraft.

The Apache is the most capable multi-role combat helicopter, combining performance and lethality with more affordable and efficient maintenance. It will provide the Indian Air Force with enhanced dominant force projection capabilities and will address the full spectrum of conflict to peacekeeping and nation building.

The tandem rotor H-47 Chinook is the most versatile, advanced heavy lift helicopter in the world, providing maximum value at the lowest risk. The H-47 Chinook offers India heavy-lift and high-altitude transportation for a multitude of military, humanitarian, rescue, disaster relief, fire-fighting and nation-building missions in all climates and conditions and altitudes. The aircraft is ideally suited for India's vast distances, austere environments and high altitudes.

Significant portions of the helicopters are already being made in India. Dynamatic Technologies manufactures the ramp and pylon for the CH-47 Chinook helicopter in India. Boeing's joint venture with Tata Advanced Systems Limited (TASL) called TATA Boeing Aerospace Limited (TBAL) is manufacturing aerostructures for the Apache in Hyderabad. The joint venture will become the sole producer of AH-64 fuselages globally.

At the facility opening ceremony of the joint venture in March this year, Nirmala Sitharaman, the Minister of Defence, said, "I congratulate Tata and Boeing for taking this bold step towards Make in India and making this substantial investment in the defence space. The manufacturing of advanced defence platforms and being integrated with the complex global supply chain will help our aerospace industry acquire technology, build local capability, provide employment and become a global exporter."

TBAL, Boeing's first equity joint venture in India, is the result of a 2015 partnership agreement with TASL. Construction of the manufacturing facility began in 2016 and was completed on schedule. In addition, Boeing and TASL have worked closely to develop a pool of highly skilled aerospace talent through skill development initiatives.

"TBAL is just the beginning of Boeing's future journey of partnership with India," said Pratyush Kumar, President, Boeing India. He further added, "As we progress, we see this as a major step towards future opportunities to pursue the co-development of integrated systems in aerospace and defence. Our partnership with Indian industry fulfils the goals of the 'Make in India' initiative and results in mutual growth and productivity growth for both India and Boeing."