

DefExpo 2018: Indian and Russian firms sign 7 deals for defence hardware

Russian Company JSC AGAT signed agreements for after-sale support and modernisation of the Fregat radar, installed on Indian naval ships

By T E Narasimhan

As a result of year-long talks between the governments of India and Russia on availability of spare parts for defence equipment this country had bought from there, seven agreements were signed between Indian and Russian companies on Friday at the Defence Expo in Chennai, for indigenous manufacture.

The ministry of defence had identified 48 items covering all major platforms which can be made in India with Russian collaboration. The products to get support include helicopters, aircraft and naval systems.

In the Third India-Russia Military Industrial Conference between the two countries, held at DefExpo 18, the Indian manufacturers and Original Equipment Manufacturers (OEMs) from Russia had discussion on the final aspects before the signing.

Larsen & Toubro signed one deal for various programmes of the navy and for Future Ready Combat Vehicles (FRCV) and rockets' co-production on Indian territory. Ananth Technologies signed an agreement for opto-electric sighting and navigation for Su-30MKI aircraft. Ananth also signed one to set up technical and logistics support in India for the T90-S and T72 tanks in service with the army.

Visitors look at a model of the Sukhoi Su-30 military jet on the third day of Defexpo 2018 in Chennai on Friday.

Russian Company JSC AGAT signed agreements for after-sale support and modernisation of the Fregat radar, installed on Indian naval ships.

Ajay Kumar, secretary, defence production, said the first meet was in Delhi in March 2017, to address the issue of maintenance and lifecycle support of Russian-origin defence platforms in India, by facilitating production of spare parts in the country.

Several procedural issues related to transfer of technology, setting up of joint ventures (JVs), intellectual property rights, and others have been discussed.

Four platforms - 231 Mark-I aircraft, INS Vikramaditya, MiG-29K aircraft and Mil Mi-17 helicopters - were identified for manufacturing of components and spares in India through transfer of technology, partnerships and JVs with the Russian OEMs.

At the second conference in August 2017, as many as 39 Indian companies and 32 Russian ones were engaged in discussion, apart from the Indian and Russian authorities. The armed forces in India and Hindustan Aeronautics Ltd undertook an exercise, to identify Indian industry partners which could manufacture the specific spares and components. The list was shared with the Russian counterparts and further discussion has been held by industry representatives from both sides.

The new deals would pave way for transfer of technology for some identified spares and there would be concerted effort for more such initiatives, it was stated.



DRDO outlines investment plans

The Defence Research and Development Organisation (DRDO) has earmarked 25-30 per cent of its ~180-billion Budget allocation for new projects, including developing an unmanned aerial vehicle for border surveillance. It has lined up several projects in various verticals for future development, including missiles, said S Christopher, chairman of DRDO. C P Ramnarayanan, director-general (aeronautical systems), said the organisation is planning to complete the payload trials by this year end. The department has received 270 patents in the last three years. DRDO, along with two private agencies as production partners, has designed and developed an advanced Towed Artillery Gun System. On exports, he said the organisation has exported naval system worth \$37.9 million. DRDO is in talks to export some of the missiles. It is planning to develop an anti-tank missile, which can be launched from both helicopter and from the ground.



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India- Bangalore based MSME Pushpak Products inks pact with DRDO

(MENAFN - KNN India) Bangalore based MSME Pushpak Products inks pact with DRDO New Delhi, Apr 13 (KNN) in a bid to involve private industries including the Micro, Small and Medium Enterprises (MSMEs) in Defence Manufacturing, DRDO handed over the products it has developed to private players as a part of its Transfer of Technology (TOT) drive.



In this direction, at the ongoing DefExpo 2018, Bangalore based Pushpak Products India Private Limited has signed a Technology Transfer Agreement (ToT) with Defence Research and Development Organization (DRDO).

For indigenously developed innovative food engineering systems for armed forces in food related industries, the DFRL lab of DRDO has signed Memorandum of Understanding with Pushpak. Besides this, DRDO signed MoU with another 15 MSMEs also.

The ToT agreement was signed between S Christopher, Secretary Defence R & D and Chairman, DRDO and Pushpak Prakash, Founder and Managing Director of Pushpak Products Private Ltd. The

objective behind collaboration with industries is to share the opportunities on India defence area to support 'Make in India' initiative and help MSMEs to come forward to support India's indigenously developed Technologies.

Pushpak Products India Pvt. Ltd, Bangalore is one of the reputed organizations engaged in manufacturing and supplying a wide array of Material & Ground Handling Equipment and Electro Chemicals for space craft components in India.

<http://menafn.com/1096732050/India-Bangalore-based-MSME-Pushpak-Products-inks-pact-with-DRDO/>

DRDO outlines Rs 18,000 cr investment plans

The country's premier defence research institute has allocated about 25-30 per cent for developing new projects during the current financial year, Defence Research and Development Organisation Chairman S Christopher said.

The DRDO has earmarked Rs 18,000 crore as investment plans for the current fiscal, which includes developing the next generation lighter Brahmos missile, a top official said today.

The country's premier defence research institute has allocated about 25-30 per cent for developing new projects during the current financial year, Defence Research and Development Organisation Chairman S Christopher said.

Christopher, who is also Secretary, Research and Development, DRDO, was outlining some of the major initiatives to be taken up during the this fiscal at the ongoing DefExpo. The defence exhibition was formally inaugurated yesterday by Prime Minister Narendra Modi at Thiruvananthapuram, about 40kms from here.

"As far as funding is concerned, for this year it is about Rs 18,000 crore. Nearly 25-30 per cent will be going in for newer projects," he said. BrahMos Aerospace, CEO and Managing Director, Sudhir Mishra said, "We have a proposal to develop BrahMos next generation missiles which will be termed as BrahMos NG missile."

"This missile would be lighter than existing BrahMos and will have almost similar kind of ranges and would be able to launched from various platforms," he said. As the missiles would be lighter, BrahMos was also also planning to have more launches from submarines, ships and aircraft, the chairman said. DRDO, Director General, Electronics and Communication Systems, J Manjula said DRDO was working on long range radars that can cover over 1,000 kilometres.

"We are also working on developing self-protection suites for fighter aircrafts and also working on electro-optic surveillance systems for submarines," she said. DRDO Scientific Advisor to Raksha Mantri, G Satheesh Reddy, said they were working on "anti-tank missiles" which can be launched both from helicopter and the ground. "Some of the projects that we have in the pipeline is developing long range version of surface-to-air missile (SAM)," he added.

The DRDO chairman said the organisation was also planning to take up "high endurance autonomous under water vehicle" for surveillance applications and also developing "autonomous surface ship". DRDO, Director General (SAM), Chitra Rajgopal said they were working on developing safe-storage solution for ammunition. "We are also looking at underground solutions which are not so expensive by using various innovative features. In addition, we are also looking at eco-friendly disposal of obsolete ammunition," she said

<https://www.moneycontrol.com/news/business/drdo-outlines-rs-18000-cr-investment-plans-2548655.html/>



India to reduce reliance on Russian defense imports

Russia has been the largest defense supplier to India since the 1960s, when the MiG-21 supersonic fighter jets were bought to equip the Indian Air Force.

By N. C. Bipindra

India is reducing its dependence on Russia for critical defense programs, with the joint venture BrahMos missile set to be guided by a locally-developed target tracking device in the next year.

Defense scientists have developed a new indigenous system that identifies missile targets to replace the Russian-developed seeker on all future BrahMos, Sudhir K. Mishra, the chief executive officer of BrahMos Aerospace said.

“Our objective is to make use of the Indian seeker on all future BrahMos missiles,” Mishra said in an interview on the sidelines of India’s defense show, DefExpo, on Wednesday in Chennai. “The Russians say if the Indians supply a cheaper, cost-effective and reliable seeker, then let us take it from India.”



There are also plans to use a locally-made warhead on the missile, he said, without specifying a time frame. Russia accounted for 68% of India’s arms imports from 2012 to 2016, according to Stockholm International Peace Research Institute. It’s been the largest defense supplier to India since the 1960s when the MiG-21 supersonic fighter jets were bought to equip the Indian Air Force. These

were then license-produced at the state-held Hindustan Aeronautics Limited until recently, when India began to junk the MiG jets and plan a complete phase out of the aircraft by 2022.

Military modernization

As Prime Minister Narendra Modi pushes ahead with his military modernization process with a targeted \$250 billion spend over 10 years till 2025, India has widened the scope of its arms purchases to include equipment from the US. In the last two years, the US has emerged as India’s top defense supplier. Since 2007, the US has won defense orders from India worth \$17 billion, according to data compiled by Bloomberg.

India is preparing to test an anti-ship version of the seeker sometime in October-November this year, Mishra said. A successful second test would allow it to go into production soon after.

Hypersonic development

In the next five years BrahMos Aerospace plans to develop the hypersonic BrahMos missile that can achieve speeds of Mach 5, or five times the speed of sound, Mishra said. The Indian-Russian joint venture is working on overcoming the technological challenges involved in achieving hypersonic speeds for the present Mach 2.8 missile.

BrahMos is also working to extend the missile’s range to 800 km, he said, without giving a time frame. In March 2017, after India formally joined the international Missile Technology Control Regime, BrahMos successfully tested an extended range of 400 km for the missile.

<https://www.hindustantimes.com/business-news/india-to-reduce-reliance-on-russian-defense-imports/story-zjKyVk65rmwKOh91sUN1BJ.html/>

Clean tracks: Indian Railways installs record number of 1.25 lakh bio-toilets on trains

By Devanjana Nag

At present, Piyush Goyal-led Indian Railways is operating 27 sections as Green Corridors and all the trains running on these sections are equipped with bio-toilets. According to the ministry, installing bio-toilets on trains ensures there is no direct discharge of human waste on the tracks.

The “bio-toilet project” of Indian Railways is first of its kind, being used by any railroad in the world for on-board accelerated digestion of human waste.

Bio-toilets in Indian Railways: In its initiative to provide clean and improved toilets, Indian Railways had decided to install bio toilets in train coaches. Till March 2018, the national transporter has fitted about 1,25,000 bio-toilets in its coaches, says a Railway Ministry release. In January 2011, 57 bio-toilets were introduced in one train i.e. Gwalior-Varanasi Bundelkhand Express. According to Railway Ministry, the highest ever bio-toilets in train coaches were installed during 2017-18. The total number of bio-toilets installed in 2017-18 is 40 per cent higher than the set target of 40,000 bio-toilets and 64 per cent higher than the installation of 34,134 bio-toilets in 2016-17. At present, Piyush Goyal-led Indian Railways is operating 27 sections as Green Corridors and all the trains running on these sections are equipped with bio-toilets. According to the ministry, installing bio-toilets on trains ensures there is no direct discharge of human waste on the tracks.



The “bio-toilet project” of Indian Railways is first of its kind, being used by any railroad in the world for on-board accelerated digestion of human waste. The bio-toilets in trains are installed underneath the lavatories and the human waste discharged into them is then acted upon by a colony of anaerobic bacteria. Further to this, the bacteria converts the human waste mainly into water and small amount of bio-gases, which escape into atmosphere and waste water is discharged after chlorination onto the track.

Thus, the human waste does not fall on the railway tracks. Indian Railways claims that this helps to maintain cleanliness and hygiene on platforms, and facilitate track and coaches maintenance staff to perform their work more efficiently. The ‘Make in India’ bio-toilets in Indian Railways have been developed jointly by Indian Railways’ Engineers & DRDO’s scientists. The initiative is one of the examples where the technology developed for defence applications has been used for civilian purpose. Moreover, the collaboration between DRDO, RDSO and the field units of Indian Railways have facilitated the adaption and large scale deployment of the technology.

According to Railway Ministry, each day approximately 4,000 MT of human waste is discharged from train coaches. However, with the introduction of bio-toilets in 60 per cent train coaches commensurate human discharge in open, has been eliminated. In addition to the efforts made by Indian Railways, the success of the “Bio-Toilet project” largely depends on the co-operation of valued customers or passengers of Indian Railways by not throwing any in-organic material like bottles, polythene, napkins, paper or plastic cups, paper, nappies, cloth, ghutka pouches, cigarette or bidi buds etc. in toilet pans or bowls.

<http://www.financialexpress.com/infrastructure/railways/clean-tracks-indian-railways-installs-record-number-of-1-25-lakh-bio-toilets-on-trains/1132021/>



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Mahindra Defence Systems' Remote Weapon Station Demonstrated

MDSL's Remote Weapon Station (RWS) is a remotely operated stabilized weapon system. At DefExpo India 2018, it is demonstrated both on the ground and on the same company's new 4x4 LBPV (Light Bullet-Proof Vehicle) designed for patrol missions.

Mahindra Defence Systems' Remote Weapon Station for medium machine gun (Picture source: Army Recognition)

The weapon station presented here has been designed for a 7.62mm medium machine gun (MAG 58, MAG 2A, M240) and can be installed on any type of vehicle able to receive such a device, or on a static platform. It is equipped with a compact optics suite with a CCD day camera, thermal imager and laser range finder.



The weapon station allows inhibit zones for firing and motion to be defined by gunner or by default who works with a 10.5" colour ruggedized operator display with one touch function selection. The joystick used to operate the MG has reprogrammable function buttons.

There is an "ammunition library" thanks to which the gunner needs only to select the ammunition that will be fired, all its data being retrieved for calculation.

<https://defenceaviationpost.com/mahindra-defence-systems-remote-weapon-station-demonstrated/>

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India-US defense partnership touted at DefExpo

Strong defence partnership between India and the United States (US) was touted at DefExpo 2018, the key defense trade exhibition. US Ambassador to India Kenneth I. Juster and Major General Bryan Suntheimer, Deputy Commanding General of U.S. Army Pacific, led a large and diverse U.S. delegation to DEFEXPO 2018.

The exhibitions showcased the U.S. defense industry's commitment to partnering with India to provide the highest quality, most reliable, and most technologically advanced defense equipment and systems in the world - from small arms and unmanned aerial systems to ground combat capabilities, helicopters, and our most modern fighter aircraft. "The U.S. designation of India as a Major Defense Partner, a status unique only to India, marked a significant milestone in U.S.-India defense cooperation. Our two countries continue to augment these ties through the Defense Technology and Trade Initiative, military exercises, official visits and exchanges, and extensive sales of military systems and platforms," the statement from US Consulate in Chennai, said .

"(United States) President Donald Trump and Prime Minister Narendra Modi are driving forward this Major Defense Partnership and our broader strategic relationship with a shared vision for peace, security, and prosperity in the Indo-Pacific region," the statement added. The delegation included active duty military officers, officials, and industry executives, demonstrating the depth and breadth of the commitment of

the United States to its major Defense Partnership with India. Nineteen U.S. companies exhibited their products at DEFEXPO 2018's USA Partnership Pavilion; many more U.S. companies participated.

"The way to maintain peace is through strength," said Ambassador Juster during a conversation with Defence Minister Nirmala Sitharaman at a session organized by the U.S.-India Business Council. "As India builds out its defense capabilities, we want to support it." "What the United States does with India will change the geopolitics of this region," Ambassador Juster remarked at the ribbon-cutting ceremony for the USA Partnership Pavilion.

"I firmly believe that, for there to be a peaceful, stable, and secure Indo-Pacific, we need to have a strong U.S.-India defense relationship. That sends a signal of strength throughout the region that no other relationship will.

http://www.business-standard.com/article/news-ani/india-us-defense-partnership-touted-at-defexpo-118041400503_1.html