Fri, 07 Feb 2020

Many countries have shown interest in acquiring BrahMos: DRDO Chief

Several countries, including the Philippines and Vietnam, have shown interest in acquiring the BrahMos missile which can hit targets at around 300 km

Lucknow: Defence Research and Development Organisation (DRDO) Chief Satheesh Reddy on Thursday said that many countries have shown interest in acquiring the BrahMos supersonic cruise missile which can be exported to friend nations.

Mr Reddy said the target of increasing defence exports to $5 billion was achievable and the DRDO would play an important role in it.

"BrahMos supersonic cruise missile is one of the most important products that we are looking to export. We have received many queries about the missile system," he said.

Several countries, including Philippines and Vietnam, have shown interest in acquiring the BrahMos missile which can hit targets at around 300 km.

Mr Reddy also elaborated on the other products that can be exported and said, "We can also offer radars, anti-tank missiles, surface to air missiles and various types of torpedoes for exports."

"The goal of exporting $5 billion in defence exports in the next five years is the direction given by the Prime Minister and we all have to work towards the meeting the target. I am sure that the technologies and capabilities that have been developed over the years and what it is today, we can definitely achieve it," he further added.

https://www.ndtv.com/india-news/defence-research-and-development-organisation-chief-satheesh-reddy-many-countries-have-shown-interes-2176198

Fri, 07 Feb 2020

BrahMos missile ready for exports, many countries interested: DRDO Chief

Lucknow: After Prime Minister Narendra Modi called for increasing defence exports to USD 5 billion, DRDO Chief Satheesh Reddy on Thursday said that many countries have shown interest in acquiring the BrahMos supersonic cruise missile which can be exported to friendly foreign countries.

In an exclusive interaction with ANI, the Defence Research and Development Organisation (DRDO) Chief said the target of increasing defence exports to USD 5 billion was achievable and the DRDO would play an important role in it.

"BrahMos supersonic cruise missile is one of the most important products that we are looking to export. We have received many queries about the missile system," Reddy said.

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https://in.news.yahoo.com/brahmos-missile-ready-exports-many-countries-interested-drdo-132048961.html

The Tribune
VOICE OF THE PEOPLE

Fri, 07 Feb 2020

More lethal BrahMos to be tested by year-end

By Ajay Banerjee

Lucknow: A next variant of BrahMos is expected to be tested by year-end. It will travel further than the existing range of 300 km and its precision strike ability will be fine-tuned to hit within 1 m of designated target.

At the DefExpo here, the BrahMos has on display an existing missile platform that has been inducted for various usages in the Army, Navy and the Indian Air Force (IAF).

The one that is expected to be tested this year is likely to have a range of 500 km and bring down the precision ability from the present – within 10 m radius of the target – to the just one metre. It will have better sensors and tracking devices which are now available after research.

The test will be of the land attack version which can be launched from land to another land target. Such a weapon – land-to-land attack – has been inducted into the Army albeit with a range of 300 km.

The range of the BrahMos can be increased after India becomes a part of the elite Missile Technology Control Regime (MTCR). The MTCR hinders the transfer of technology for missiles more than 300 km. Russia despite having the technology could not give it to India due to MTCR restrictions.

So far, three BrahMos missile regiments have been deployed in the western sector to counter threats from Pakistan. And fourth regiment is tasked in Arunachal Pradesh.

14 pacts signed

- The 5th India-Russia military industrial conference was conducted in Lucknow where 14 MoUs were inked for manufacture of spare parts in India for Russian-origin equipment used in India
- In September 2019, an inter-governmental agreement was signed at Vladivostok that allows joint manufacturing of spare parts
- The armed forces have been facing difficulties due to long delays in supply of spare parts of Russian origin military platforms and systems

https://www.tribuneindia.com/news/more-lethal-brahmos-to-be-tested-by-year-end-37008

Jane's 360

Fri, 07 Feb 2020

Defexpo 2020: India unveils wheeled armoured platform, upgraded Sarath IFVs

By Dmitry Fediushko

Lucknow: India's defence industry unveiled two new infantry fighting vehicles (IFVs), the Wheeled Armoured Platform (WhAP) and an upgraded variant of the BMP-2/2K Sarath, during the 5-9 February Defexpo 2020 defence exhibition in Lucknow, northern India.

The WhAP IFV, which is powered by a Cummins ISXe 600 turbocharged diesel engine coupled to an automatic transmission, has been developed by the state-owned Defence Research and Development Organisation (DRDO) to meet Indian Army (IA) requirements, and is available in both an 8×8 and an 8×4 configuration.

"The vehicle's protection meets STANAG 4569 requirements, with actual protection levels depending on the task," a DRDO official told *Jane's* . The modular protection results in the platforms weight varying between 19 and 26 tonnes, with amphibious capability provided at up to 24 tonnes. The WhAP, which can reach a top speed of 100 km/h on land, has a cruising range of up to 500 km.

The WhAP is armed with the manned turret from the BMP-2. "It is the most cost-effective solution for the IA," said the DRDO official, pointing out that the turret is fitted with a 30 mm 2A42 main gun, a Kalashnikov PKT 7.62 mm co-axial machine gun, and a roof-mounted launcher for the AT-4 Spigot anti-tank missile system.

Meanwhile, India's state-owned Ordnance Factory Board (OFB) showcased an upgraded variant of the BMP-2 Sarath IFV. Compared with the baseline Sarath, this modernised variant is fitted with new sensor suites featuring thermal imagers and TV cameras for the gunner and commander.

https://janes.ihs.com/Janes/Display/FG_2694827-JDW

hindustantimes

Fri, 07 Feb 2020

India to develop 200-km range tactical ballistic missile

The surface-to-surface missile, being developed by the Defence Research and Development Organisation (DRDO), has been named Pranash

By Rahul Singh

Lucknow: India is working on a new tactical ballistic missile capable of striking targets at a range of 200km, two top government officials said on Thursday on condition of anonymity.

The surface-to-surface missile, being developed by the Defence Research and Development Organisation (DRDO), has been named Pranash, the first official cited above told Hindustan Times at DefExpo 2020, a military systems' exhibition organised by the Department of Defence Production that seeks to project India as hub for global defence manufacturing.

The new weapon traces its origin to the Prahaar missile developed by the DRDO, the official said. The Prahaar has a range of 150km but the army wanted a weapon with a better range, which is why Pranash is being developed, he added.

"The configuration of Pranash has been frozen and development trials will begin by 2021-end. We will be in a position to offer it for user trials in two years. The army wants a missile with a range in the region of 200km," said a second official aware of the matter.

The non-nuclear Pranash missile will be propelled by a single-stage solid propellant engine, he added.

DRDO's short-range Prithvi series of missiles with ranges of 150 to 350 km are nuclear-capable and powered by a liquid propellant engine that has its limitations. "Missiles with solid propellant engine are ready-to-use. However, liquid propellant engines can be complicated as the liquid propellant mixture has to be added before the launch," the second official said.

India's Agni series of nuclear-capable ballistic missiles can hit targets at different ranges between 700km and 5,500km.

Once developed, the Pranash missile could also be exported to friendly foreign countries, said the first official cited above."It will be one of the cheapest missiles in the world in its range category. Also, the missile is outside the purview of the Missile Technology Control Regime (MTCR), which places export restrictions on missiles with ranges of more than 300km," he said.

Increasing weapons exports is a top priority for the government. Prime Minister Narendra Modi on Wednesday said the country's target was to clocks exports worth Rs 35,000 crore in the next five years.

This is in line with a draft Defence Production Policy, released in March 2018, that visualises India as one of the top five countries in the aerospace and defence sectors in the coming years. The PM said India had exported military hardware worth Rs 17,000 crore during the last two years, compared to Rs 2,000 crore in 2014.

This year's DefExpo is being attended by ministers from almost 40 foreign countries.

https://www.hindustantimes.com/india-news/india-to-develop-200-km-range-pranash-missile/story-eev9HZEZo2m6ADnIjSnvcP.html

Jane's 360

Fri, 07 Feb 2020

Defexpo 2020: India to test Nirbhay cruise missile powered by indigenous propulsion system

By Rahul Udoshi

Lucknow: India is expected to carry out in April the first developmental trial of a Nirbhay cruise missile fitted with an indigenous propulsion system, an Aeronautical Development Establishment (ADE) official told *Jane's* during the 5–9 February Defexpo 2020 exhibition in Lucknow, northern India.

Called the Indigenous Technology Cruise Missile (ITCM), the weapon, which is essentially the Nirbhay missile fitted with the indigenous Small Turbo Fan Engine (STFE), is being developed by Gas Turbine Research Establishment (GTRE) of India's state-owned Defence Research and Development Organisation (DRDO). ADE has planned two developmental tests using the ITCM to demonstrate the STFE and a new radio frequency seeker.

The ADE official also confirmed that new variants of the missile are either planned or already being developed, including the ground/ship-launched Long Range Land Attack Cruise Missile (LRLACM), the Submarine Launched Cruise Missile (SLCM) – or Nirbhay SLCM – and the future air-launched version, possibly known as Air-Launched Cruise Missile (ALCM) or Nirbhay ALCM.

The 6 m-long, nuclear-capable, land-attack Nirbhay has a diameter of 0.52 m and is fitted with two tapering-chord fold-out (backwards) wings with a span of 2.7 m. The one-tonne missile is brought up to the takeover speed of its turbofan engine by a jettisonable solid-propellant booster. The missile cruises at a speed of 270–305 m/s, and its maximum strike range is stated to be 1,000 km.

The 110 kg STFE straight jet engine has an onboard gas generator for powering on the engine, which generates 425 kgf of thrust and is credited with a 2 kW power offtake. Measuring 900×360 mm, the engine has already completed stand-alone ground testing, a GTRE official told *Jane's* .

ADE's priority is to complete trials of the LRLACM by 2021, with preparations already under way for the test in April. This will be followed by another test before an actual live firing set to take place in January/February 2021.

Meanwhile, the Indian Navy (IN) has expressed an interest in acquiring the ship-launched version at the earliest by 2023, he added.

In addition, the Nirbhay SLCM is also being prepared for its first underwater test from a simulated submarine (pontoon) by the end of 2020, which is set to be followed by an actual test firing in mid-2021.

The ADE official noted that the project is on track and expressed optimism that the weapon will soon be moving into production-standard configuration, followed by the operational testing phase. Once the technology behind the missile is certified, there is a proposal to develop the Nirbhay ALCM within two to three years.

https://janes.ihs.com/Janes/Display/FG_2694763-JDW

Jane's 360

Fri, 07 Feb 2020

Defexpo 2020: India's DRDO displays remotely operated platform to defuse unexploded ordnance

By Jayesh Dhingra

Lucknow: The Research and Development Establishment (R&DE) laboratory of India's state-owned Defence Research and Development Organisation (DRDO) has displayed a remotely operated platform designed to handle and defuse unexploded ordnance.

Called the Unexploded Ordnance Robot (UXOR) the platform, which was exhibited during the 5-9 February Defexpo 2020 exhibition in Lucknow, northern India, has an operating range of 2,000 m line-of-sight and can handle unexploded ordnance of up to 1,000 kg and 1 m in diameter, according to the DRDO.

DRDO scientist Mridu Kant Pathak told *Jane's* that the UXOR uses a 7-axis manipulator arm with a 3-axis cutting mechanism that holds the cutting nozzle of an abrasive water jet cutting machine for in-situ munition 'case entry'.

The grappler mounted on the loader arm is used to handle the larger and heavier ordnance. The sensors on the UXOR include a series of 11 cameras for navigation and operation control, a laser, and an ultrasonic sensor-based system for nozzle alignment.

The complete unexploded ordnance disposal system includes the UXOR and a 6×6 carrier vehicle fitted with a master control station.

https://www.janes.com/article/94146/defexpo-2020-india-s-drdo-displays-remotely-operated-platform-to-defuse-unexploded-ordnance

ABP LIVE

Fri, 07 Feb 2020

DefExpo2020: DRDO exhibits special car for army jawans

Defence Research and Development Organisation (DRDO) exhibited a special car without driver and installed arms features for army jawans at the ongoing Defence Expo in Lucknow on Wednesday.

With an aim strengthen India's position in the world, especially in the defence manufacturing sector, Prime Minister Narendra Modi, on Wednesday, said that the government expects to do arms and ammunition export business of Rs 35,000 crore in the next five years.

https://news.abplive.com/videos/news/india-defexpo2020-drdo-exhibits-special-car-for-army-jawans-1154519

onmanorama

Fri, 07 Feb 2020

India set to develop long range, land attack cruise missile

By Anantha Krishnan M

Lucknow: A new home-grown, subsonic missile will be homing on to its target adding might to the Indian Navy by mid of 2023.

A top military source tells Onmanorama at the DefExpo2020 that the new weapon will be named Long Range Land Attack Cruise Missile (LRLACM). It will have a range in excess of 1,000 km and will be launched from a UVLM (Universal Vertical Launcher Module) of BrahMos. The unique UVLMs in operation is designed, developed and patented by BrahMos Aerospace.

These BrahMos UVLMs are already operational on 30 ships of Indian Navy and the new missile will sit inside the same launcher.

The missile is the result of a naval requirement projected to the Defence Research and Development Organisation (DRDO). The sanction for the project is expected in two months and the first trials of the missile could begin in early 2023.

The missile project has been designated to Aeronautical Development Establishment (ADE), a Bengaluru-based DRDO lab developing unmanned systems.

ADE has the expertise of developing India's first home-grown subsonic cruise missile, Nirbhay.

Developmental flights

Around 20 developmental flights are being planned of the LRLACM, tipped to be developed with completely indigenous systems. Barring small sensors and accelerometers every component on this missile will be of indigenous class.

The terminal homing featured will be aided by a desi radio frequency (RF) seeker. Similar to Nirbhay, LRLACM too will be capable of flying at low altitude with sea-skimming capabilities.

At DefExpo2020, a video is being played out showing the sea-skimming capabilities of Nirbhay during its last launch.

The missile's journey has been captured by a chase aircraft and also through Electro-Optical Targeting System (EOTS).

During a visit to DRDO's exhibition area, the Chief of Naval Staff Admiral Karambir Singh on Wednesday expressed his desire to get the new missile delivered at the earliest.

Once DRDO completes the trial phase of the new missile, the Indian Navy is keen to place an order on development cum production partner (DCPP). An order worth Rs 5,000 crore for 200 LRLACMs will be placed on the DCPP by Indian Navy.

Nirbhay's new avatar

Interestingly, the Nirbhay project, which completed six developmental trials from March 2013 to April 2019, has been technically closed.

The project has taken a new desi avatar with a renewed outlook and will be now known as the Indigenous Technology Cruise Missile (ITCM). The Indian power plant for ITCM – the Short Turbo Fan Engine (STFE) – is developed by Gas Turbine Research Establishment (GTRE) in Bengaluru.

The first launch of ITCM will be with STFE and it will have an RF seeker developed by RCI, Hyderabad. The trial is expected to be conducted in April this year.

The air variant of ITCM too is taking shape at ADE in addition to a submarine variant as well.

DRDO is aiming to attain complete self-reliance for its missile programmes. Efforts are afoot to cut the delays during the development phase and LRLACM and ITCM are among the batch of weapons cruising through the new thought process.

(The writer is an independent aerospace and defence journalist, who blogs at Tarmak007 and tweets @writetake.)

https://english.manoramaonline.com/news/nation/2020/02/06/india-defexpo-long-range-land-attack-cruise-missile.html

THE NEW INDIAN EXPRESS

Fri, 07 Feb 2020

DRDO robots to help fight terror, handle hostage crisis

These robots will have specific roles — covering the periphery of an operation area, entering target area and operating from close proximity of a target, a senior DRDO Scientist said

Lucknow: The Defence Research and Development Organisation (DRDO) is ready with robots which will help to eliminate terrorists and free hostages from their clutches.

These robots will have specific roles — covering the periphery of an operation area, entering target area and operating from close proximity of a target, a senior DRDO scientist said.

The first set will do outside surveillance, will create map and will relay it to the Master Control Station (MCS) from where each of them will be controlled and commanded. The second set of robots will be a miniaturised unmanned armed vehicle, BolBot.

These robots will be best utilised in a situation where terrorists are holed up in an unknown building or in a hostage situation where the map of the location and inside the building will be known on the spot, thereby decreasing the possibility of collateral damage to security forces.

These robots will be fitted with radars and sensors having capability so that these can be used in dark rooms or in night operations.

These also will have carriage and arms with a manipulator to execute the order from the MCS. Also, they will share data with the MCS.

The third set of robots — the smallest of the three — will be capable to go and sit in a corner, while continuously capturing real-time data for soldiers to take action.

“The robots have reached a stage where they are almost working autonomous. But, for final stage some work is pending,” the scientist said. These robots are on display in the DRDO Pavillion at the 11th Edition of Defence Expo.

https://www.newindianexpress.com/nation/2020/feb/06/drdo-robots-to-help-fight-terror-handle-hostage-crisis-2099655.html

दैनिक जागरण

Fri, 07 Feb 2020

75 किमी दूर से दुश्मन को मारेगा पिनाक

पुलक त्रिपाठी • लखनऊ

भारतीय सेना को अपनी मारक क्षमता से मजबूत करने वाली रॉकेट गाइडेड पिनाक अब दुश्मन को 75 किलोमीटर दूर से मार गिराने को तैयार है। 327 किलोग्राम वाले पिनाक का निशाना बेहद अचूक है, इसके चलते दुश्मनों को भागने भी मौका नहीं मिलता।

डिफेंस रिसर्च एंड डेवलेपमेंट आर्गनाइजेशन (डीआरडीओ) के अधिकारियों के मुताबिक गाइडेड पिनाक रॉकेट (मल्टी बैरल रॉकेट लांचर सिस्टम) को युद्ध के दौरान प्रयोग में लाया जाता है। चार सेकेंड के अंतराल पर एक रॉकेट लांच होता है। रक्षा विशेषज्ञों के अनुसार 5175 मिमी लंबे पिनाक का इस्तेमाल दुश्मन देश में स्थित किसी फिक्स टारगेट को ध्वस्त करने के लिए किया जाता है। जैसे दुश्मन के एयरपोर्ट, एयरबेस आदि। इसके अलावा दुश्मनों के सैनिक जत्थे को भी ध्वस्त करने में पिनाक का निशाना एकदम सटीक बैठता है।

आमतौर पर युद्ध के दौरान दुश्मनों के ठिकानों को ध्वस्त करने के लिए प्लेन से बमबारी की जाती है। मगर पिनाक एक वैकल्पिक और बेहद सटीक निशाना साधने में कारगर साबित माना जाता है। इससे किए गए हमले में दुश्मन के पास जाने की जरूरत नहीं। रॉकेट के जरिए ही बम वर्षा की जा सकती है। डीआरडीओ अधिकारियों का दावा है कि पिनाक के रेंज को और बढ़ाने पर काम किया जा रहा है।

फिक्स्ड टारगेट को ध्वस्त करने में बेहद कारगर डीआरडीओ की मिसाइल, पिनाक रॉकेट गाइडेड प्रणाली रही आकर्षण का केंद्र

सफल साबित हो रहे पिनाक एमके 1 रॉकेट

गाइडेड पिनाक रॉकेट की तरह पिनाक एमके 1 रॉकेट भी है। जिसकी अधिकतम रेंज 37.5 किलोमीटर और वजन 277 किलोग्राम है। तलनात्मक रूप से इसकी रेंज भले ही गाइडेड पिनाक रॉकेट से कम हो, मगर इसका निशाना भी अचूक है।