hindustantimes

Mon, 02 March 2020

Easily available home-made explosives major threat, DRDO Chairman

By Steffy Thevar

Pune: Homemade explosives, like petrol bombs and gelatin sticks, which are easily available in the market are more dangerous than high-end explosives, said Satheesh Reddy, secretary, Department of Defence Research & Development and Chairman Defence Research and Development Organisation (DRDO)

He was speaking during the second national conference on explosive detection, at Pashan, on Sunday.

During the conference, a rapid identification detector Raider-X was also officially launched. Raider-X can detect up to 20 explosives within a distance of about two metres, but can be expanded as the requirements with certain limitations. It is developed jointly by High Energy Materials Research Laboratory (HEMRL), Pune and IISc Bengaluru.

The conference was held on the occasion of the diamond jubilee celebration of High Energy Materials Research Laboratory, Pune based DRDO laboratory on Sunday.

Reddy, stated that with increasing terrorist activities, detection of explosives became a compelling need of the hour. He said, “Security agencies are continuously suffering from Naxal attacks in various parts of our country. To effectively thwart the attempts of these anti-social elements, academia, DRDO and other scientific institutes must focus on explosive detection in both bulk and trace forms.”

He further said most of the recent terrorist attacks or violent attacks where explosives are observed to be not necessarily high end but are made with elements which are easily available like petrol, gelatin sticks, ammonium nitrate and others. He said, “The research agencies need to focus on such detection too.”

Jayant Naiknavre, DIG, ATS, Mumbai, in his address highlighted the need for indigenous development of versatile explosive detection devices.

He said, “As end-users, we want detection devices which are compact, accurate and can detect with maximum stand-off distance so that the security personnel is not at risk. The DRDO can work on these challenges.”

Shiva Umapathy, director Indian Institute of Science Education and Research (IISER), Bhopal, who had worked on the device said, “The stand-off distance can be increased but this will also increase the size and weight of the kit which might make it difficult for security personnel to move around. The data library also can be upgraded as and more explosives can be added.”

“The device has various applications including narcotics, for local police, for customs and other detection agencies who need to detect various elements which may be explosive or non-explosive in nature,” said Umapathy.

https://www.hindustantimes.com/cities/easily-available-home-made-explosives-major-threat-drdo-chairman/story-paNxUUGO9w54d0QeCJfIAL.html

Outlook
THE NEWS SCROLL

Mon, 02 March 2020

DRDO Chief calls for synergy in developing explosive detectors

Pune: DRDO Chairman Dr G Satheesh Reddy on Sunday said that with the rising terror activities, detection of explosives has become the need of the hour, and called upon the scientific institutes, academia and security forces to focus on explosive detection in bulk and trace forms.

He was speaking at a national workshop on Explosive Detection at the High Energy Material Research Laboratory (HEMRL) here.

"There is no universal solution in the field of explosive detection as it is constantly evolving. There is a need for a synergetic approach towards developing latest explosive detectors by bringing scientific institutes, academia, security agencies, armed forces and police on one platform," Reddy said.

"With increasing terrorist activities, detection of explosives became a compelling need of the hour. Security agencies are continuously suffering from Naxal and other attacks by inimical forces in various parts of the country," he said.

"To effectively thwart the attempts of these anti- social elements, academia, the Defence Research and Development Organisation (DRDO) and other scientific institutes must focus on the explosive detection in both bulk and trace forms," he added.

According to him, a number of technologies were evolving for detection of explosives.

"Particularly in a country like India, which is suffering from these attacks, both at the cross border and within, there has been continuous pressure from the nation and the security forces, agencies to develop various detection mechanism of these explosives," he said.

To fulfil the requirements, several labs under the DRDO, educational institutes have been trying to develop devices and instruments, Reddy added.

During a media interaction later, Reddy was asked if there was any possibility of a setting up a single entity in order to bring the efforts together. In his reply, he said that four laboratories under the DRDO were already working on it.

"We would like to have a steering committee, which will actually drive the outcome of this kind of conference, such as who will do what, the finance, requirements and other things," he said.

During the workshop, a new explosive detection device named "Raider-X, developed by HEMRL, Pune and IIS Bangalore was launched. It is a rapid identification detector, used in the identification of wide range of explosives.

In his key-note address, Director of IISER, Bhopal, Dr Umapathy, mentioned that serious research on explosive detection technologies in academia started in India only a decade ago, which is now rapidly expanding.

He said no single technology would suffice to detect all types of explosives.

"Hence scientists should think of amalgamation of two or three technologies and come out with devices to provide a comprehensive solution," he added.

Jayant Naiknavare, DIG of ATS, Mumbai, called for the need to indigenously develop versatile explosive detection devices.

He said explosive detectors should be made available to the security agencies for countering the threats faced by the forces.

Around 250 delegates from different DRDO labs, Army, CRPF, CISF, BDDS, Police, academic institutes, industry and other security agencies took part in the workshop.

(Disclaimer: This story has not been edited by Outlook staff and is auto-generated from news agency feeds. Source: PTI)

https://www.outlookindia.com/newsscroll/drdo-chief-calls-for-synergy-in-developing-explosive-detectors/1748813

THE TIMES OF INDIA

Mon, 02 March 2020

Armed with DRDO's tech, city co makes electronic grenades

By Shishir Arya

Nagpur: Economic Explosives Limited (EEL), a company under city's Solar Group, a major producer of commercial and defence explosives, expects to put up its latest electronic multimodal hand grenade for trials soon. This is one step ahead of the latest grenade being acquired by the Army.

The technology for making the grenade has been shared with the company by Chandigarh-based Terminal Ballistics Research Laboratory (TBRL), a unit under DRDO, a senior official of EEL told TOI.

Based on it, EEL has come up with initial units of the grenade, that were also put up on display at Axis-2020 exhibition under way at VNIT.

TBRL has also shared the technology of the non-electronic multimodal grenades with EEL, making it the sole private player to take part in the process for supplying the weapon to the army.

EEL has already taken part in a request for proposal (RFP) by the Army to make multimodal grenades without using the electronic mechanism. The weapon will also be made by the Ordnance Factory, Khamaria in Madhya Pradesh. Both the entities await the bulk production order from the Army.

In the meantime, EEL said it has also developed electronic grenade — mechatronic — which also has a multimodal function. The mechatronic was on display at Axis 2020.

A senior official from the company told TOI that the company has finished internal trials of the electronic grenades and soon user trials, which is an evaluation by the Army, will take place. The electronic device will ensure the perfect timing for explosion in the grenade.

Maintaining the timing for explosion, once the pin is removed, is a crucial requirement for a grenade's functioning. As per the Army's requirements, it has to be not before 3.5 seconds and not later than 4.5 seconds.

In the grenades made so far, the process is chemically controlled. "With the electronic chip fitted, precise timing can be maintained," said the company's official.

https://timesofindia.indiatimes.com/city/nagpur/armed-with-drdos-tech-city-co-makes-electronic-grenades/articleshow/74431028.cms

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Sat, 29 Feb 2020

'Indian Navy ships armed with BrahMos can defeat warships of any country'

Sudhir Mishra, scientist and Director General (BrahMos), DRDO, said, "Had we exported to other countries, we would have certainly become much bigger and made much more money."

Ahmedabad: Stating that all the Indian Naval ships guarding the Indian Ocean and the Arabian Sea are armed with BrahMos missiles that give only 22 seconds reaction-time to the enemy, Sudhir Mishra, scientist and Director General (BrahMos), DRDO (Defence Research and Development Organisation), said on Friday that these supersonic cruise missiles have given the Navy the capability to "defeat warships of any country."

While speaking on the topic of the "Role of BrahMos in nation building" at an event organised by the Confederation of Indian Industry (CII) in Ahmedabad, Mishra said, "It is an unmanned aircraft loaded with explosives… A ship usually has a radar that can only see only up to 20 kilometres… the speed of the BrahMos is 970 metre per second. When it is about 20 kilometres away, the enemy gets only 22 seconds to react. It is very difficult to engage a projectile coming with so much speed."

The BrahMos missile has a range of 300 km and a speed of Mach 3.

Mishra, who is also the CEO and MD of BrahMos Aerospace Pvt Ltd, said there are currently eight variants of the Brahmos that can be fired from different platforms like ships, Sukhios, submarines and land systems.

"One of the Naval captains told me that for a 600 kilometre diameter I have only friends in the ocean. The reason is nobody can afford to be an enemy within this diameter. Because, we are having a capability to defeat warships of any country. When I underline any country, you can include all the countries without telling you the name," he said. Mishra also showed videos of BrahMos hitting a ship and breaking down into two pieces and said, "This is the fear our enemies and adversaries are having. This kind of capability we provide to our Navy."

Serving Naval officers have spoken in public about the increasing might of the Chinese in the Indian Ocean which is a key trade route for ships plying to South-East Asia and beyond.

BrahMos Aerospace Pvt Ltd a private entity developed in joint venture with Russia that began operations with Rs 1,300 crore about 21 years ago has today "created business worth Rs 34,000 crore" with only Indian Armed forces as the only customer.

"Had we exported to other countries, we would have certainly become much bigger and made much more money," Mishra said.

Brahmos Aerospace, the joint venture between DRDO and NPOM of Russia, was formed on February 12, 1998. "DRDO has a 50.5 per cent equity in the project. Had it crossed 51 per cent, it would have become a defence Public Sector Undertaking and the government never wanted another PSU to come up. So we are a private company which is owned and run by the government," he added.

He said 70-75 per cent of the Brahmos systems were being manufactured in an indigenous manner and more than 200 industries have employed 20,000 workers for the development and manufacture of the missile. These industries include L&T which manufacturers canisters for the missile near Vadodara.

https://indianexpress.com/article/india/indian-navy-ships-armed-with-brahmos-can-defeat-warships-of-any-country-6292227/

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Sat, 29 Feb 2020

Gujarat to sign MoUs with DRDO next week

In the budget presented by Deputy Chief Minister Nitin Patel, the state government has made a provision of Rs 7 crore for starting a "School for Defence Studies in Gujarat University" by signing an MoU with DRDO

Ahmedabad: The Defence Research and Development Organization (DRDO) will sign MoUs (Memorandum of Understanding) with educational institutes in Gujarat next week. These will help begin defence-related courses in the state, said retired Air Marshal RK Dhir who is the advisor to the Gujarat government for Defence and Aerospace industries.

Pointing to a "good engineering base in Karnataka", which is being tapped by global aircraft manufacturer Airbus for operating an engineering centre at Bangalore, Air Marshal Dhir said, "We plan to do something similar here. With DRDO's help — the Chairman has agreed — next week, the Education Secretary is going to sign an MoU where a special school of Defence Studies will be opened in Gujarat University and a Defence Technology centre at IIT RAM," said Dhir at an event organised by the Confederation of Indian Industry (CII) on Friday.

In the budget presented by Deputy Chief Minister Nitin Patel, the state government has made a provision of Rs 7 crore for starting a "School for Defence Studies in Gujarat University" by signing an MoU with DRDO. An additional Rs 12 crore has been provided for introducing the course of Department of Advance Defence Technology at Ahmedabad-based IITRAM in collaboration with DRDO.

"The government has factored it in the budget (announced on Friday). We plan to start the courses this year itself. Retired scientists from DRDO will be helping us in build the curriculum and to teach. Thereafter, these students will be able to go to the laboratories and work for a year," he added. The official said these courses will help Gujarat build a good base of blue-collar workers who can be employed by the defence and aerospace industries who set up base in Gujarat.

https://indianexpress.com/article/india/gujarat-to-sign-mous-with-drdo-next-week-6292256/

Jane's

Fri, 28 Feb 2020

India's technology demonstration vessel receives new radar as it nears completion

By Kerry Herschelman

Washington DC: A technology demonstration vessel (TDV) being built for India's Defence Research and Development Organisation (DRDO) at Cochin Shipyard Limited (CSL) has been fitted with a housing for a new type of dual-panel long-range radar system.

There is limited publicly available information on the radar, but details on the sensor, known as the Long-Range Multi-Function Radar (LRMFR), emerged in 2016.

Indian sources have described the radar as an active phased array radar with a range in excess of 500 km. Like the Elta MF-STAR, it features octagonal faceplates that are approximately 5.5–6 m in diameter.

The TDV project was contracted on 11 August 2015 with a value of INR3.65 billion (USD50.2 million), and this was subsequently increased to INR3.9 billion as the scope of work expanded.

https://www.janes.com/article/94571/india-s-technology-demonstration-vessel-receives-new-radar-as-it-nears-completion

BIG NEWS NETWORK.com

Sun, 01 March 2020

India beats Russia, Poland to bag $40 million defence deal in Europe

By Ajit K Dubey

New Delhi: In a major success, India has bagged a deal worth USD 40 million to supply four indigenously-built weapon locating radars to Armenia by beating Russian and Polish firms.

"The deal is for supplying four Swathi weapon locating radars developed by the Defence Research and Development Organisation (DRDO) and manufactured by the Bharat Electronics Limited (BEL) to Armenia in Europe," government sources told ANI.

The supply of the equipment to Armenia has already started and this is being considered as a big achievement for 'Make in India' programme in the defence sector, they said.

Sources said Armenians had conducted trials of systems offered by Russia and Poland that were also good but they decided to go for the reliable Indian system.

The contract is for four Swathi weapon locating radars which provide fast, automatic and accurate location of enemy weapons like mortars, shells and rockets in its 50-km range.

The radar can simultaneously handle multiple projectiles fired from different weapons at different locations. The Indian Army is also using the same radars for its operations along the Line of Control in Jammu and Kashmir where they trace the source of attack by Pakistani positions. The system was given for trial to Army in 2018.

Officials said the export order will help India open a new market for the sale of its indigenous systems, which are cheaper than their European and other rivals.

The Defence Ministry is also now looking at other orders from South-East Asia, Latin America and Middle-East countries for boosting defence exports for which a target of Rs 35,000 crore has been set by Prime Minister Narendra Modi. (ANI)

https://www.bignewsnetwork.com/news/264180208/india-beats-russia-poland-to-bag-40-million-defence-deal-in-europe

hindustantimes

Sat, 29 Feb 2020

India's top science minds to bomb national explosion workshop with latest inventions

Pune Scientists from across India will present and share their research work on detection of explosives during the second national workshop on explosive detection, organised at the APJ Abdul Kalam auditorium in Pashan on March 1.

To be Inaugurated by Satheesh Reddy, Secretary, Department of Defence R&D, and Chairman DRDO, the workshop has been organised to commemorate the golden jubilee of the High Energy Material Research Laboratory, operating under DRDO Pune.

The workshop provides a platform to scientists, technocrats and users to share knowledge, experience and technological advancements made in the recent past.

A total of 250 delegates from different DRDO labs, Army, Central Reserve Police Force (CRPF), Central Industrial Security Force (CISF), bomb detection and disposal squad (BDDS), police, academic institutes, industry and other security agencies will attend.

Raider-X: bomb disposal from a safe distance

A new explosive detection device, named the Raider-X, developed jointly by HEMRL, Pune and IISc Bengaluru will be launched.

Raider –X is a Rapid Identification Detector, used to identify a wide range of explosives. The device is capable of detecting concealed explosives using the Raman Spectroscopy-based technique Umars (Universal Multiple Angle Raman Spectroscopy) from a distance.

The data library can be built in the system to expand its capability to detect a number of explosives in pure form as well as with the contaminants.

https://www.hindustantimes.com/cities/india-s-top-science-minds-to-bomb-national-explosion-workshop-with-latest-inventions/story-Xfc9M2q9KSAu9awtb2RX7L.html

hindustantimes

Sun, 01 March 2020

Nat'l science day: Mission Shakti Chief takes aim with 'smaller, but lethally accurate' weapons for the future

Kinetic energy is the future concept for weapons. Challenges are to achieve a low miss, or direct hit, at conditions of high closing velocity and low homing duration, says U Raja Babu, project director, Mission Shakti, DRDO, Hyderabad

Pune: The evolution of warfare was laid out for science enthusiasts, with U Raja Babu, project director, Mission Shakti, DRDO, Hyderabad, insisting that "smaller, but lethally accurate" is the way forward.

Babu was speaking on 'Technological Challenges - Missile and Space Defence', at the CSIR National Chemical Laboratory (NCL) on the occasion of National Science Day on Friday.

Babu, who comes from a defence background, laid out his view of what the future holds.

"The future will be of nature-centric warfare and information warfare. Constantly, new technologies are coming out. Today, smaller ones but targeted weapons are needed. From tactical systems we are working on network-centric system. Improvement is coming in accuracy of weapons."

"Kinetic energy is the future concept for weapons. Challenges are to achieve a low miss, or direct hit, at conditions of high closing velocity and low homing duration.

"We need faster autopilots, accurate estimators and advanced guidance subsystems to lethally enhance or neutralise a payload. Space security is another important future challenge and I look forward to you all students as working in this field," Babu said.

Babu called for students to pursue challenging careers to take India ahead.

"Mission Shakti is not just a mission, but a message to the nation and to the outside world that India is no longer a developing country and a developed country," Babu said, adding, "We have the technical capabilities to do major projects. When we got the go ahead by PM Modi to do this mission (Shakti) in 2016, within two years our scientists worked round the clock and executed the mission. It was very challenging for us and I look forward to all Science students working on such missions or projects in the future" Babu said.

Mission Shakti is India's anti-satellite weapon system, developed at DRDO, and headed by Babu.

Ashwini Kumar Nangia, director of CSIR NCL, talking on the occasion said, "This is the 70th year of NCL and we will be displaying the history of the NCL through a permanent exhibition inside the campus. Research scholars of NCL will make movies on NCL's work. In the next two months we will open the exhibition room here on the campus."

https://www.hindustantimes.com/cities/mission-shakti-chief-takes-aim-with-smaller-but-lethally-accurate-weapons-for-the-future/story-2P9e6nJTLVwL1zB0rrEMNM.html

DEFENCE AVIATION POST

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Sat, 29 Feb 2020

ASTRA air-to-air missile is quietly killing it

A handful of yellow journalists in the Indian media have been postulating that the Indian Air Force is not even ready for any kind of aerial skirmish with PAF similar to the events that occurred last year after the incisive Balakot air strikes.

Contrary to these ostensibly motivated alarmism, DRDO and the IAF have readied a potent air-to-air missile which is touted to be the best in class currently available anywhere in the world. Way back in May 2014, the Astra has battled steady headwinds to turn the corner and find an unusually pleased customer in the Indian Air Force.

Following a rapid-fire spate of seven guided tests, topped off with the two 'combat' tests, the IAF was persuaded to sign on for 50 pre-production Astra missiles, its healthiest show of confidence in a program. These missiles could prove invaluable if and when an exigency arises.

One of India's most ambitious and challenging missile projects, the ASTRA (Sanskrit for 'weapon') beyond visual range air-to-air missile had entered a final round in Sept 2018 of trial launches ahead of service with the Indian Air Force.

With over 20 the missile was fired in a fully guided mode at a manoeuvring aerial target drone. With over 20 aerial tests since it was first fired from an IAF Su-30 MKI in May 2014, the weapon is to

be tested a handful more times before being handed over to the Indian Air Force for a cycle of user trials before induction into service.

ASTRA initially had some technological challenges which have been overcome successfully. With persistent effort by DRDO and with active IAF support, all the user evaluation has been completed and ASTRA is now ready for induction.

https://www.defenceaviationpost.com/2020/02/astra-air-to-air-missile-is-quietly-killing-it/

The Sentinel
of this land, for its people

Sun, 01 March 2020

GOC 4 Corps of Indian Army Lt Gen Shantanu Dayal visits DRL-DRDO, Tezpur

Tezpur**:** General Officer in Commanding (GOC) of 4 Corps of the Indian Army Lt Gen Shantanu Dayal, visited the Defence Research Laboratory (DRL-DRDO), Tezpur on Friday as a chief guest on the occasion of National Science Day 2020 along with Simmi Dayal. Dr SK Dwivedi, Director of DRL, gave a comprehensive overview of the ongoing research programme of the laboratory under the Arunodaya programme.

The GOC appreciated the good efforts being undertaken by the scientists of DRL for improving and promoting the well-being of the troops in the border and forward areas of Northeast India. He encouraged and motivated all the scientists as there is a need to do a lot for the well-being and combat effectiveness of the troops in ground conditions including acclimatisation in high altitude areas, stabilisation of fragile mountain soils because of infrastructure development, water quality issues and sewage disposal in cantonment areas etc.

The GOC awarded the National Science Day medal and certificate to Dr PK Raul, Sc. 'D' of DRL for his National Science Day Oration. He visited the DRL Exhibition Hall "Chitramandap" and was explained about the exhibits of various innovative products and technologies developed by the DRL-DRDO.

https://www.sentinelassam.com/north-east-india-news/assam-news/goc-4-corps-of-indian-army-lt-gen-shantanu-dayal-visits-drl-drdo-tezpur/