

Innovate to enhance defence system, says ex-DRDO chief

Nagpur: Engineers should make it a habit to experiment and innovate to enhance vigilance and defence system in the country, said VK Aatre, an eminent scientist and former head of Defence Research and Development Organisation (DRDO), on Tuesday. Replying to the felicitation after being conferred with lifetime achievement award for his contribution to the field of science at Suresh Bhat Hall at a function organized by The Engineers' Forum, Aatre said, "War is inevitable and therefore it is important to upgrade technology to prevent heavy destruction it causes in the end".

Having played a vital role in the development of a wide spectrum of electronic technology and deeply involved in human resource development at DRDO, Aatre spearheaded the development of underwater technology for Navy through design and production of state-of-the-art transducer and sonar suits. 'Role of engineers in defence of the nation' was the theme of the 20th Engineers' Day organized as a tribute to Bharat Ratna Mokshagundam Visvesvaraya. Annual souvenir of the forum was also published. In his presidential address, Pramod Padole, director of Visvesvaraya National Institute of Technology (VNIT), spoke about the similarity between research and development (R&D) of defence and engineers.

He said, "A large number of projects designed by the defence can be used for the benefit of the society. Equipment for vehicle tracking and night vision are to name a few. A lot of private sector firms have also collaborated with defence to come up with better technological solutions." Speaking about R&D at VNIT, Padole said, "The mechanical and metallurgy department is working on projects that are costing up to Rs60 crore and they are funded by various agencies. The biomedical engineering department also came up with a technique to convert 2D City scan into 3D solid model where complicated geometry is made easy. Mock operations can be carried out before the final surgery." President of the forum Prakash Kulkarni, working president Suresh Gandhewar, secretary Keshav Tayade and treasurer Yadao Laxane were seated on the dais.

<https://timesofindia.indiatimes.com/city/nagpur/innovate-to-enhance-defence-system-says-ex-drdo-chief/articleshowprint/65862854.cms>.



Fri, 19 Sept 2018

DRDO lab in city gets nod to make key unit for T-90

DRDO lab in city gets nod to make key unit for T-90 By Hemanth CS, Bangalore Mirror Bureau | Sep 19, 2018, 04.00 AM IST The government, which has drawn flak for keeping the Hindustan Aeronautics Limited (HAL) out of the Rafale deal, has given approval to develop a defence equipment from a Bengaluru-based laboratory. The Defence Acquisition Council (DAC) on Tuesday gave approval for the development of Individual Under Water Breathing Apparatus (IUWBA) for T-90 Tanks. IUWBA has been developed by the city-based Defence Bio Engineering and Electromedical Lab (DEBEL), a life sciences laboratory wing of the DRDO. The IUWBA is used by the crew of tanks as a safety gear and is required by the crew for 'emergency escape' while negotiating water obstacles. A DRDO source said the prototype of the underwater breathing apparatus was developed a few months ago and that trials have been conducted by the army for sometime now. "We are glad that the DAC has approved for further

design and development of the underwater breathing apparatus. The equipment has been undergoing trials for the last few months,” said the DRDO source. The source added that the equipment was demonstrated at various places, which includes a trial at a swimming pool. Explaining about the equipment, the source said it’s similar to the underwater breathing equipment used by divers but with some technological modifications to meet the requirements of the tank crew. DEBEL already has expertise in underwater systems, having developed a submarine escape set which consists of a hydro-suit and breathing apparatus (Breathing Bag). Apart from under-water systems, DEBEL has also developed products and is working in the areas of aeromedical and biomedical engineering, NBC protection, protective equipment and flying clothing. The DAC also got approval for design and development of test equipment for Guided Weapons System of T90 Tank. Totally, the value of the equipment approved for procurement is over Rs 9,100 crore.

<https://bangaloremirror.indiatimes.com/bangalore/others/drdo-lab-in-city-gets-nod-to-make-key-unit-for-t-90/articleshowprint/65862012.cms?prtpage=1>.



Fri, 19 Sept 2018

Controversy on Rafale deal is unwarranted: DRDO ex-DG

Former Director General of Defence Research and Development Organisation (DRDO) and Padma Vibhushan Dr V K Aatre on Tuesday said that every Defence deal should be kept secret and ongoing controversy over the Rafale deal was unwarranted. Dr Aatre was in the city to grace Engineers’ Day programme organised by Engineers’ Forum at Suresh Bhat Auditorium in Reshimbagh. Indian Air Force desperately requires a multi-role fighter jet like Rafale to strengthen India’s air defence to counter neighbouring threats. However, no one should question such deals because every company tries to hide the selling cost of the equipment.

Dassault did the same, he said while talking to mediapersons at the venue. Keeping himself apart from any political comment on the matter, Dr Aatre said that India needed good aircraft and Rafale was upto the mark as per the requirement of IAF. Asked about the Navy variant of LCA, Dr Aatre said that Tejas was one of the best fighter aircraft in the world that already completed more than 4,000 hours of flying without any mishap. Indian Navy has some issue with its weight but Hindustan Aeronautics Limited (HAL) and DRDO are working in this regard.

Dr Aatre joined DRDO in 1980 at Naval Physical and Oceanographic Laboratory (NPOL), Cochin. He replaced the former President of India Bharat Ratna Dr APJ Abdul Kalam as the Director General of DRDO in the year 2000. He also served as Scientific Advisor to the Defence Minister. Dr Aatre said that private sector would play a major role in development of Defence industry in India. However, till date private companies are just providing spare parts and small equipment to the Defence sector. Government should come forward to provide private companies a platform for manufacturing of Defence equipment, he said.

<http://thehitavada.com/Encyc/2018/9/19/Controversy-on-Rafale-deal-is-unwarranted--DRDO-ex-DG.aspx>.

Fri, 19 Sept 2018

India's Home-Made Breathing Apparatus to Enable 45-min Deep Fording of T-90

The apparatus will enable T-90 tank crews to conduct deep fording for at least 45 minutes. State-owned defense lab DRDO is expected to transfer the technology to the private sector for mass production, following which they will be made available to the army starting 2019.

New Delhi (Sputnik) — Crews of the Indian army's T-90 tank are set to equip themselves with major war-fighting apparatus used while crossing rivers or water canals in the rough Himalayan terrain. The equipment will make them capable to operate submerged tanks continuously for at least 45 minutes during deep fording.

The Defence Acquisition Council (DAC), headed by Defense Minister Nirmala Sitharaman, on Tuesday accorded approval for progressing design and development of such equipment, known as individual underwater breathing apparatus (IUWBA), for T-90 tanks.

"Developed by DRDO Lab DEBEL, the IUWBA is used by the crew of tanks as a safety gear and is required by the tank crew for emergency escape when negotiating water obstacles while deep fording," a statement issued by the Indian Defense Ministry reads.

Dead End for Spike-MR Deal: India Tests Man Portable Anti-Tank Guided Missile

During deep fording, in the eventuality of the tank stalling mid-crossing, there is no alternative for the crew but to flood the tank to escape from the fighting/driver compartments of the tank and reach the surface of the water as per the enunciated emergency escape procedure.

The Indian army has put forth an annual requirement of 2,000 units of underwater breathing equipment with effect from 2019-20, while in total it will purchase 6,628 units of such equipment. The state-owned defense lab DRDO is expected to transfer the technology to the private sector for mass production. Companies like Flash forge, Jyotech, Sure Safety (India) Pvt Ltd, Osho Corp Global Pvt Ltd, H&H Precision Pvt Ltd have positively responded to the proposal for mass production.

Indian Scientists Solve Major Glitch in Homegrown Anti-Tank Nag Missile

The IUWBA, which will be a separate apparatus, will weigh around 5 kg. The equipment will retain its efficiency when stored at temperature ranging from —5 degrees Celsius to 55 degrees Celsius.

The Indian Defense Ministry has also accorded approval for design and development of test equipment for guided weapons systems of the T-90 tank. At present, the equipment is imported from foreign firms.

<https://sputniknews.com/asia/201809181068139292-indias-indigenous-breathing-apparatus-tanks/>.



Fri, 19 Sept 2018

New Akash missiles get green light

The Army, which is inducting the indigenously developed Akash short-range surface-to-air missile (SRSAM) system, will get an upgraded variant. The Defence Acquisition Council (DAC) gave its procedural approval to the variant on Tuesday.

The Army has already inducted two Akash regiments, and ordered two more last year after a global tender for the SRSAM was cancelled. The Akash system has since been upgraded, and the DAC has now approved an upgraded variant for the third and fourth regiments.

Advanced features

“The upgraded version will include the seeker technology and possess 360-degree coverage, and will be of compact configuration. It is operationally critical equipment, which will provide protection to vital assets,” the Defence Ministry said in a statement.

The Defence Research and Development Organisation (DRDO) developed Akash as part of the Integrated Guided Missile Development Programme initiated in 1984. It is made by Bharat Dynamics Limited (BDL). Akash has a range of 25 km and can engage multiple targets at a time in all-weather conditions. It has a large operational envelope, from 30 metre to a maximum of 20 km. Each regiment consists of six launchers, each having three missiles.

The DAC also gave approval for the development of an individual under-water breathing apparatus for the T-90 tank. The apparatus is used by the tank crew for emergency escape.

