

BDL, DRDO Sign MoU on New Missile

Hyderabad: Bharat Dynamics Limited (BDL) and Defence Research and Development Organisation (DRDO) have signed a memorandum of understanding (MoU) on joint development and production of an indigenous quick reaction surface-to-air missile (QRSAM).

The missile will be designed and developed by DRDO and manufactured by BDL for supply to the Army.

The MoU was signed by BDL chairman and managing director V.Udaya Bhaskar and DRDL director K.Jayaraman at the Defence Research & Development Laboratories here on April 29.

Directors and senior officials of BDL and DRDO were present at the ceremony. QRSAM will have an advanced radio frequency seeker with multiple target handling capability.

It can be canister-launched and will have a range up to 30 km.

DRDO completes 248 projects in 5-year

The Government today said the DRDO has successfully completed 248 projects in the last five years from April 1, 2011 to March 31, 2016.

The projects are in the categories of Mission Mode, Science & Technology, Technology Development, Infrastructure & Facilities and Products Support.

Some of the major completed projects are: Active-cum-Passive Towed Array Sonar, Advanced Fuel Cell, Aerostat-Akashdeep, Airborne Active Electronically Scanned Antenna, Anti Torpedo Decoy System, Mareech, Armoured Amphibious Dozer, Electronic Warfare Suite for Fighter Aircraft, Modern Electronic Support Measure, Rotary Engine for Unmanned Aerial Vehicle, Self Protection Suite for Helicopters, Underwater Autonomous Vehicle and Unmanned Ground Vehicle.

The DRDO has signed Licensing Agreement for Transfer of Technology (ToT) of DRDO developed products to enable industry to grow in the civilian market beyond the defence market.

This information was given by Defence Minister Manohar Parrikar in a written reply in Rajya Sabha.

House panel irked at delay in defence purchase

By Dalip Singh

Committee says no boost to 'Make in India' programme

The Parliamentary standing committee on defence has expressed its dismay at defence PSUs inability to offer cutting edge solutions including protective gear for soldiers.

This is against the spirit of Prime Minister Narendra Modi's much publicised "Make in India" campaign to reduce forces reliance on military hardware.

The panel, in its report to be submitted to Parliament, identified grey areas – modernisation of the Army, shortage of ammunition and bullet-proof jackets – to paint a grim picture of perennial shortcomings in procurement policy hugely impacting war preparedness. Commenting on the state of affairs, the committee, headed by BJP MP Maj Gen(rtd) B C Khanduri, stated that equipment become obsolete by time they are purchased and handed over to the Army.

The members' frustration was evident in their concern expressed that more than six years time has lapsed since the defence acquisition council gave its nod for buying more than 1.86 lakh bullet-proof jackets. Responding to the defence ministry explanation that request for proposal was retracted after three vendors who participated in the trial evaluation of jackets held a year back failed and that 50,000 of them are under procurement stage, the panel registered its disappointment "The committee is disappointed to note that while on one hand the "Make in India" programme envisages to transform India into a global design and manufacturing hub, on the other, no defence public sector undertaking is in a state to offer cutting-edge protective gear for our soldiers," the yet-to-be-made public report stated.

The committee rued that the "Make in India" concept has not been given a comprehensive shape, baring staggered steps including liberalisation of FDI in defence sector.

There is no "Make in India" project categorisation which would have allowed special allocations for it, due which the panel has suggested specific steps be taken to develop core and critical capabilities in the country.

Analysing import content in equipment produced and developed by indigenous platforms, The Hindustan Aeronautics Ltd depends on foreign supplies for its 44% to 60% of parts. Similarly, ships manufactured by Mazagoan Docks depend on 54% to 72% imports. BEL depends on 41% to 49% import of spares.

The committee has asked the government to fix accountability in case of "inordinate delays" in executing projects under taken by the Defence Research and Development Organisation (DRDO). There are 93 ongoing major projects in DRDO labs, including AWACS, Agni IV, Agni V, Arjun main battle tank and Tejas LCA. Terming regular delays as "deploring attitude", the panel says there are 45 major projects of more than Rs 100 crore where cost and time revisions have taken place 11 and 16 times respectively.

Complaints

- The members expressed concern over the fact that more than six years time has lapsed since the defence acquisition council gave its nod for buying more than 1.86 lakh bullet-proof jackets
- The committee rued that the "Make in India" concept has not been given a comprehensive shape, baring staggered steps including liberalisation of FDI in defence sector

‘Cloud seeding, new innovations to help fight fires in future’

Dehradun: In a bid to enhance its fire fighting capabilities, the forest department is planning new measures such as cloud seeding which was attempted by China to make clouds rain artificially. Along with this, they are also attempting at getting fire forecasts and exploring the options of using modern fire fighting equipment developed by the Defence Research and Development Organisation.

Disclosing these details, forest secretary S Ramaswamy said on Tuesday, "Cloud seeding is dispersing chemicals into clouds, thereby accelerating the creation of ice crystals that trigger artificial rain. This technique can help in dousing of fires. The technique has been successfully used in a couple of states earlier in the country. That is why we are consulting experts if this technique, which although quite expensive, can be applied in our state."

He added that taking a cue from the disaster forecast which was devised for safety of pilgrims during the char dham yatra in the aftermath of the flash floods in 2013, the government was planning to do the same for forest fires, as and when there was some respite from the current onslaught. "This would be done by taking separate weather forecasts which include temperature and moisture and also predicting the possibility of fire based on this," he added, saying that with such forecasts, all the preliminary precautionary measures can be taken to prevent fire in any forest.

In addition, Ramaswami said the Defence Research and Development Organisation (DRDO) is being consulted to come up with modern fire fighting equipment. "DRDO has assured to conduct a study on this. There is already a vehicle which has been devised by DRDO which can accommodate water tankers, sprinklers etc and can be taken to a height to douse forest fires."

Meanwhile Ramaswamy also talked of creating of mobile squads of local people for which they would be remunerated. Besides this, he said, elaborate communication system too will be set up to coordinate information between different agencies working on fire control.

Bangalore Mirror
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Rural Women Denied Cancer Detection Tech

In a country which has a third of global cervical cancer deaths, no one is talking about the tested computer-aided technology called Cytoscan

Lacking awareness, rural women feared being screened for cervical cancer. And that has sent a sophisticated computer-aided technology of the Defence Research Development Organisation (DRDO) to detect such cancers, off the radar.

The reason: Although lacking in awareness, many younger, unmarried rural women only knew that this cervical cancer is mainly caused by the sexually transmitted Human Papilloma Virus (HPV). But the fact is that though most cervical cancers are caused by HPV not all such cancers imply that the one who has contracted it did so after a sexual intercourse, said senior clinical oncologist Dr PP Bapsy. And not all types of HPV cause cervical cancer.

The Cytoscan system, developed by the Bengaluru-based Defence Bio-Engineering and Electro-medical Laboratory (DEBEL) of the DRDO, was able to accurately detect and classify cell abnormalities without visual examinations that used to cause discomfort to many women, especially those from rural areas.

A brainchild of late president APJ Abdul Kalam in 1995, when he was the scientific advisor to prime minister and chief of DRDO, the Rs 50 lakh Project Tulasi -- using the Cytoscan system for mass screenings among rural women -- was considered "accurate" and "successful". It was validated

by city-based Kidwai Memorial Institute of Oncology (KMIO) and Hyderabad-based Nizam's Institute of Medical Sciences (NIMS).

But Project Tulasi saw just two pilot projects of mass screenings of rural women in Ranga Reddy district in Telangana (then a part of Andhra Pradesh) and West Godavari district (also in Andhra Pradesh). Then the project petered out. According to DEBEL sources, it was mainly due to problems in making rural women aware of cervical cancer and how exactly one contracts it.

DEBEL's Cytoscan system was considered better than the conventionally used pap smear test, which experts say, involves lab tests and microscopy alongside visual examinations.

Tulasi was a door-to-door project that involved no visual examination (only samples were given for computer-aided cell examinations), which added to the comfort levels of rural women who did volunteer to get screened.

The Cytoscan system was a personal computer-based system capable of acquiring and analysing the image of cells to detect and classify cell abnormalities. According to DEBEL scientists, the software developed for this system was specifically meant to detect uterine cervical cancer.

"The system was found to be very useful for mass screening of women for cervical cancer by using image processing technology and pattern recognition technology originally developed by the DRDO for life support systems," said a senior DEBEL scientist.

According to the Indian Journal of Medical and Paediatric Oncology, cervical cancer is ranked as the most common cancer among Indian women. India has about 400 million women above the age of 15, who are at a risk of developing cervical cancer. The current estimates indicate approximately 1,32,000 new cases diagnosed and 74,000 deaths annually in India, accounting for nearly 1/3rd of the global cervical cancer deaths.

Project Tulasi was conducted under the aegis of the Society for Biomedical Technology (SBMT), an inter-ministerial working group under DEBEL to bring doctors, engineers and public service administrators together to apply life-saving defence technology spin-offs for healthcare benefits of the masses.

It was through the SBMT that Kalam pushed for Project Tulasi in 1995, the two pilot projects of which went on for five years.

SBMT was set up at the behest of Kalam in 1995 and overseen by Prof Arun Tiwari who was appointed programme director to develop civilian spin-offs from defence technologies, and who co-authored some of Kalam's books, including Wings Of Fire.

Today, no one is willing to go on the record about Project Tulasi. When senior DEBEL scientists were contacted, Bangalore Mirror was directed to Prof Tiwari who is currently adjunct professor at University of Hyderabad, who in turn said, "It is DEBEL which conducted the project; you should speak to them!"

Whatever happened to Project Tulasi, the fact remains that in the absence of a system to conduct mass screenings with which rural women would have been comfortable, a majority of these women in India's vast rural outback stand to go undiagnosed for this deadly cancer.

Cytoscan System

This is a personal computer-based system capable of acquiring and analysing the image of a cell with a view to detect and classify cell abnormalities. The system was found very useful for mass screening of people for cancer. It uses pattern recognition technology originally developed by DRDO for life support systems and also image processing technology. The hardware consists of a PC, microscope, CCD camera and frame grabber. The multi-module software consists of an

acquisition module, display module, mouse-based delineation module to mark the cell to be analysed, module to measure geometrical and textural parameters and an expert system to detect and classify cell abnormalities. The software developed is specifically meant to detect uterine cervical cancer. The technology was completely validated at Bengaluru-based Kidwai Memorial Institute of Oncology and Hyderabad-based Nizam's Institute of Medical Sciences.

What Was Project 'Tulasi'

Project Tulasi was a pilot project undertaken by the Society for Biomedical Technology (SBMT) to carry out screening of rural women having or suspecting to have cervical cancer. Two districts of then Andhra Pradesh -- Ranga Reddy district (now in Telangana) and the West Godavari district. The responsibility of conducting camps in the Ranga Reddy district was entrusted to Nizam's Institute of Medical Sciences in collaboration with Princess Esra Hospital, both Hyderabad-based. The work in the West Godavari district was entrusted to the Mahatma Gandhi Memorial Medical Trust at Bhimavaram, Andhra Pradesh. The camps were conducted to contact women population at their doorstep and examine them in their own ambience.

हरिभूमि

03 मई, 2016

भारतीय सेना कर रही है 1990 के 'इंसास राइफल' से दुश्मन का मुकाबला

नई दिल्ली - करीब 1990 के दशक में सेना के पैदल दस्ते (इंफैंट्री) का धारदार हथियार मानी जाने वाली इंसास (इंडियन स्मॉल आर्म्स सिस्टम) राइफल की मारक क्षमता भले ही अब जवाब देने लगी हो। लेकिन अभी फिलहाल सेना के जवानों को इसी से काम चलाना पड़ेगा। क्योंकि थलसेना की ओर से इसे बदलने की जो कवायद चल रही थी वो फिलहाल पूरा होती हुई नजर नहीं आ रही है।

एक्स कैलिबर नामंजूर

रक्षा मंत्रालय के सूत्रों ने बताया कि सेना इंसास राइफल की जगह पर जवानों को नया हथियार देना चाहती है। इसके लिए रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने एक्स कैलिबर नामक राइफल तैयार की है। यह मुख्यरूप से इंसास का ही संशोधित रूप है, जिसे लेने से सेना ने इंकार कर दिया है। इसके पीछे एक्स कैलिबर का सेना के मानकों पर पूरी तरह से खरा ना उतरना बनाया गया है। सेना की योजना इंसास की जगह पर 5.56 मिलीमीटर कैलिबर के राइफल, कार्बाइन और हल्के मशीन गन के इस्तेमाल की जरूरत है।

कमांडर सम्मेलन में हुई नामंजूर

बीते सप्ताह खत्म हुए छह दिवसीय (25 से 30 अप्रैल तक) सैन्य कमांडर सम्मेलन में एक्स कैलिबर राइफल को लेकर विस्तार से चर्चा हुई। इसमें सेनाप्रमुख जनरल दलबीर सिंह सुहाग समेत सेना की विभिन्न कमांडों के प्रमुख (कमांडर) शामिल थे। इस चर्चा में तय किया गया कि एक्स कैलिबर को सेना नहीं खरीदेगी। इंसास की जगह पर कौन से राइफल जवानों को दी जाएगी। इसके बारे में भविष्य में और चर्चाएं की जाएंगी। उसके बाद ही अंतिम फैसला लिया जाएगा।

इंसास में दिक्कत

इंसास राइफल को लेकर कश्मीर घाटी से लेकर सियाचिन ग्लेशियर जैसी ठंडी जलवायु परिस्थिति में जवानों को काफी दिक्कतें आती हैं। ठंड के मौसम में तो कभी-कभी यह राइफल अवरूद्ध हो जाते थे और इसके पॉलीमर मैगजीन फट जाते थे। सेना चाहती है कि इस हथियार को स्वदेशी गोला बारूद के अनुकूल बनाया जाना चाहिए।