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Defence Minister launched the first Indigenous Composites Sonar Dome at Defexpo-16



Defence Minister Manohar Parrikar at the launch of the first Indigenous Composites Sonar Dome at Defexpo-16 in Goa on Tuesday

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‘Make in India a boon to country’s defence’

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Panjim: The Defence Secretary and Director General of Defence Research and Development Organisation of India (DRDO) has termed Make in India in Defence Sector as a boon to the Defence of the Country and has expressed hope of radical growth and improvement in the quality and speed of the production of Defence Equipment in India. The DRDO Secretary was speaking at the press briefing on Tuesday informing of the endeavours of the DRDO in the Defence sector.

While explaining the benefits of the Make in India pitch and the new Defence Procurement Procedure Dr S. Christopher said “Today, quite a good amount of time is consumed by the time the design is moderated and checked and sent for final clearance. In the present idea is to start production at the same time of while designing so that problems if any are cleared right in the beginning. The concurrent design is the idea to solve the problems. The new ideas also include emphasis on maintenance which is a problem area” he said.

“We are further developing Agni and are revisiting the missile system by making it more efficient and are working to better it so that it can be continued further after the Agni I II III and IV models. Agni V is under this stage and we do intend to go ahead and get it operational,” Dr. Christopher said.

This year the design theme of DRDO Pavilion is "Rise of Futurism". DRDO Futurism emphasises its vision to make India prosperous by establishing world class science and technology base and provide our Defence Services decisive edge by equipping them with internationally competitive systems and solutions.

The indoor models and exhibits covers nearly the entire gamut of R&D from aeronautics, armaments & combat engineering, missiles, electronics and communication systems, materials, naval systems, life sciences, micro-electronic devices and computational systems. Some indoor exhibits includes: Model of Akash and Brahmos missiles; Aslesh, Bharani and SWATHI the Weapon Locating Radar, IR Guided Missile Tester. Laser Guided Bomb Kit Tester, Hand-held Stand-off Explosive Detector, Short Range Laser Dazzler, Advanced Towed Artillery Gun System (ATAGS), Nakshatra the Aerostat System, Combat Free Fall System, Bio-toilet model, Computerized Pilot Selection System (CPSS) model, Multimode Hand Grenade, Family of small Arms, Sonars and Torpedoes, Night Vision and Microwave Devices, Bullet Proof Jacket, Robotics & Unmanned Systems, Telemedicine, Ready to Eat Food Technologies etc.

LCA Mark II design by Dec 2018: DRDO

Betul: The Defence Research and Development Organization (DRDO) is likely to complete the design for light combat aircraft (LCA) Mark II, by December 2018, an official said at DefExpo 2016.

Speaking to mediapersons on the sidelines of the mega event at Naqueri-Quitol, director general, missile and strategic system (MSS), DRDO Satish Kumar, said the LCA Mark II would continue to develop until then.

As far as the LCA-Mark 1A is concerned, Kumar said the ministry of defence is likely to place an order for 80 such aircraft. He added that sanctions for the advanced medium combat aircraft (AMCA) fifth-generation stealth fighter were in the process of being sought and that other partners would be engaged once approval was received.

The DRDO official further said that the long range, subsonic cruise missile, Nirbhay, is likely to be launched by the end of May or June this year.

Responding to a query about when the Arjun Mark II battle tank would be ready to be handed over to defence forces, secretary of department of defence R&D and DRDO director general S Christopher, said the tank's weight had been posing an issue and that the organization was working on reducing it.

Ghatak UCAV awaiting approval from PMO, Nirbhay missile test with BrahMos seeker planned

India's ambitious plan of having a new breed of indigenous combat drones or unmanned combat aerial vehicle (UCAV), which has been named Ghatak, is currently awaiting approval from the Prime Minister's Office (PMO), OneIndia reported. It cited Dr S Christopher, director general of the Defence Research and Development Organisation (DRDO), as confirming that a report on the Ghatak project is with the PMO for further consideration.

The report was submitted by a high-powered committee that included as its members nuclear physicist R Chidambaram and Dr V K Saraswat, the former chief of DRDO and Chief Scientific Advisor to the Indian Minister of Defence. Christopher has confirmed to the news website that the committee's report had "recommended" the Ghatak project. However, the file is taking up time in the PMO owing to the project's "financial implications."

The project cost is estimated to be Rs 2,650 crore. Ghatak will be powered by the Gas Turbine Research Establishment (GTRE)'s indigenous Kaveri derivative engine (dry variant) without the after burner, and it will feature the 'flying-wing' design that is similar to the famous B-2 Spirit, a stealth bomber of the U.S. Air Force.

The project is undertaken jointly by the Aeronautical Development Agency (ADA) and DRDO. The Ghatak project follows the completion of autonomous unmanned research aircraft (AURA) programme, which was tasked to carry out research into the future Indian UCAVs.

Even as DRDO awaits clearance from the PMO, Pakistan has successfully conducted live military operation using its Burraq UCAVs, which took down "high profile targets."

Meanwhile, Christopher also confirmed that DRDO is looking for a May-June window for the next test of the subsonic cruise missile, Nirbhay. He further added that DRDO is looking for new test of the Nirbhay missile with BrahMos seeker December 2016.

Glimpse of cutting Edge Technology showcased by DRDO and Defence PSUs during DefExpo India 2016

Leading from front, Defence Research and Development Organisation (DRDO) and Defence Public Sector Undertakings (DPSUs) participated in the Defexpo 2016 in full strength. The largest Land, Naval and Internal Homeland Security Systems Exhibition of India is aimed at promoting exports in the Defence Sector in the country.

The Government aims at increasing the exports of Defence equipment by 3 to 4 times in the coming 5 to 7 years. He said that new policy initiative will permit Defence PSUs to export up to 10% of defence equipment. As export sales generate higher revenue the profit accrued will be plowed back into capacity enhancement for improving supply to the Armed forces in the long run.

Export from DPSUs will be subject to clearances from the partner concerns and Ministry of External Affairs.

DRDO had booked largest area in the exhibition which included indoor and outdoor display. This year the design theme of DRDO Pavilion is "Rise of Futurism". DRDO Futurism emphasises its vision to make India prosperous by establishing world class science and technology base and provide our Defence Services a decisive edge by equipping them with internationally competitive systems and solutions.

The DPSUs Bharat Dynamics Limited (BDL), Bharat Earth Movers Limited (BEML), Bharat Electronics Limited (BEL), BrahMos Aerospace, Hindustan Aeronautics Limited (HAL), Mazagaon Dock Shipbuilders Limited (MDL), Mishra Dhatu Nigam Limited (MIDHANI) and Ordnance Factory Board (OFB), showcased latest products and cutting edge technology.



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Goa Defexpo: A globalised arms industry in India but for the whole world

Goa: The ongoing ninth Defexpo at Goa, the biennial event that assembles the arms merchants and arms producers from all over the world is being held for the first time outside Delhi, saw the defence minister Manohar Parrikar, a native Goan, announcing the latest Defence Procurement Procedure (DPP).

Predictably, the DPP has evoked mixed reactions. Critics have a point when they say that it is not a complete document as yet since the chapter on the much-talked about strategic partners in the private sector who could join the public sector undertakings that dominate the arms productions is still being written by the defence ministry. It seems that major private Indian players like the Tatas, L&T, Mahindras and Ambanis who have entered the defence industry of late want to be strategic partners in multiple areas (ranging from manufacturing fighter plane to building warships and submarines), something the government will like to be restricted to one field only. This differing perception may be the reason for the delay on determining criteria for being a strategic partner.

However, the other features of the latest DPP (the last one was made in 2013) have been welcomed by the industry and foreign companies, an impression that I gathered by attending various seminars being held at defexpo venue Naqueri-Quitol, South Goa. While encouraging foreign companies to come to India with their capital and technology to produce and develop arms along with their Indian partners, the DPP makes it clear that that the Modi government's topmost priority will be on Indian designed, developed and manufactured (IDDM) category.

For this writer, the overall evaluation of the new DPP should wait, since the defence minister himself says that "This is not a perfect policy document. It is not full-proof. We will reexamine it after six months, during which I will keep my eyes and ears open for suggestions to improve and remove difficulties, if any". What is more important, therefore, is the clarity on the part of the Modi government that India must be a major arms manufacturing nation by developing an indigenous military-industrial base in line with the idea of "Make in India", whose products will not only meet the domestic demands but also cater to the needs of the global market. In other words, from being the world's largest importer of arms, India should transform itself in such a manner that it will be a major exporter of arms. This is the point, made by both Parrikar and Dr. S Christopher (Secretary, Department of Defence Research & Development and Director General, DRDO), that caught my attention over the last two days. Let me dwell with this theme.

Parrikar says that "India can export LCA aircraft like Tejas, Akash and Brahmos missiles after meeting the 90 percent demands of our own forces." Dr. Christopher says that while many DRDO products may not be up to the expectations of our forces, but surely, they can meet the expectations elsewhere outside the country and can be easily exported. He gave the example of the Pinaka missiles(rejected by our armed forces), which are in demand in countries of West Asia. "I am all for exporting our products abroad after meeting the domestic demands. We also can export items that do not have domestic demands. We have demands for our Brahmos and Akash missiles, small arms and many other products".

As has been pointed out, India is the world's largest importer of arms. China is also a big importer of arms; in fact, it is the fourth largest. But China is a big exporter of arms, too, at the same time. The latest estimate says that China has replaced Great Britain as the world's fifth largest exporter of arms. That bulk of the Chinese arms supplies goes to Pakistan is a different matter altogether. The point is that while importing arms is unavoidable in the life of a nation while developing, the real strength in the ultimate analysis will come from a sound indigenous defence base, which, apart from

working towards self-sufficiency or self-reliance in arms, generates wealth for national exchequer by exporting some of its products.

In other words, the bigger the gap between its exports and imports, stronger a country is. It is not that India does not export arms at all. It does. However, there is a tremendous difference between the quantum of its imports and exports, whereas ideally this gap should have been between its exports and imports. We are number one in importing arms, but as far as arms exports are concerned, our rank is as low as 26th. An estimate says that in the year 2014015, India imported Rs. 36,900 worth of arms, ammunition and related goods. In contrast, its defence exports last year were worth of about only Rs.2000 crore, a figure given by none other than Parrikar himself on the inaugural day of the defexpo.

Of course, it is to the credit of Parrikar that last August he formally allowed the Defence Research and Development Organisation (DRDO) to export defence equipment in 16 categories that included armoured vehicles, ammunition, rifles and small arms, military training equipment, electronic warfare devices, software, bombs and torpedoes. In fact, the DRDO has now shortlisted missiles for being the centerpiece of India's arms exports, within the framework of the missile technology control regime that bans exporting missiles with ranges above 300 km. Overall, the military hardware shortlisted for export includes Astra beyond-visual-range air-to-air missile, Prahar surface-to-surface missile, Akash missiles, light combat aircraft (LCA), supersonic cruise missile Brahmos, sonars, Arjun Mk-2 tanks, airborne early warning and control system, a variety of unmanned systems and battlefield radars.

Of course, it is too early to say what impact the decision to export arms will make on the potential arms-buyers. That will be known when DRDO gets concrete orders from international orders for its indigenously designed military hardware. The usual criticism of the DRDO's functioning over the years have been that it promises more but delivers less and that while designing the products it does not take into account the views and concerns of the end-users, that is, the Indian military. That India still imports nearly 70 percent of its defence needs means that the DRDO and other defence public sector undertakings have not been able to overcome serious challenges that inhibit their growth and effectiveness.

Broadly speaking, India's defence industrial policy (DIP) has so far been marked by three principal features. First, India intends to maximize its indigenous production through its own efforts – quality personnel/scientists/technologists and production centers. Second, if indigenously not feasible then the country will go for licensed production of what could be obtained abroad. This obviously involves transfer of technology from the foreign vendors so that over the years the country gains required knowledge and expertise to develop arms on its own. Third, if the situation so warrants then the country will for direct purchases. But it has so happened that the third feature has over-dominated the DIP as a whole.

The most fundamental flaw in our DIP is that we have not spent enough on our research and development (R&D). It is very easy to criticize the DRDO, but the fact remains that the DRDO's share in our defence budgets is not much to talk about if one compares the sums that the major arms exporters invest in R&D. Our brightest students do not go for R&D. There is a tremendous shortage of qualified engineers and scientists in our defence sector. And this explains why the second feature of our DIP is equally poor. You may frame enough provisions or rules for technology transfer and offsets with regard to the foreign vendors. But what use they are they if you fail to utilize them because of the essentially faulty personnel policy? Besides, whatever one may say, the sad reality is that no foreign vendors or original equipment manufacturers (OEM) will like to part with their intellectual property rights; even if they want to, their respective governments will not allow that to happen all that easily. That precisely is the reason why we have taken inordinately long time to develop Tejas or Arjun. And that is also the reason why foreign direct investment (FDI) in our defence sector will not rise beyond a point.

Secondly, it is to be learnt from the examples in the major arms-exporting countries that defence technology often involves long term investment as obsolescence here is high. The production of the next generation of an equipment or of a different variant always increases the cost of the equipment, involving, as it does, the integration of various sub –systems. Similarly, you cannot expect your indigenous products to be as good as, let alone superior to, the similar foreign products that are available in the international market. After all, making arms indigenously is a learning curve. China is exactly undergoing this process. Its home-made weapons are qualitatively inferior to foreign products. But the important point is that it is one the right course. China-made weapons will be infinitely better 10 years hence because China is climbing up that curve.

Of course, India is not China. Ours is mixed economy, a fact which should have added to our strength. Because, unlike in China, our challenge can be met by a partnership between the public and private sectors. Unfortunately, the government in the past did not encourage the participation of the private industry in the defence sector. But things are changing now, evident from the fact a record number private players - 1055 companies from India and 47 other countries – are participating in this edition of the defexpo; and what is more important, they all are unanimous in joining hands with the Indian government and public sector undertakings to build “together” a “globalized military industry” in India but for not only India but also the whole world.

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Cyber security summit

To celebrate 51 years of its existence, the Computer Society of India organised a one-day Cyber Defence summit on Tuesday. Around 300 delegates participated in the event held at DRDO.

Cyber security experts spoke about numerous facets of cyber defence and threats, highlighting the growing need for increased cyber security. Prof. Rajath Moona, Director, Center for Development of Advanced Computing delivered the keynote address where he spoke threats to national security and how it can be fought in the cyberspace.

Representatives from premier public institutions and those from the private sector participated in the summit.