

# समाचार पत्रों से चयित अंश Newspapers Clippings

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## Indian Air Force initiates Rs 33,000-cr buy of 83 Tejas fighters

*The IAF has already sent out enquiries for building a "single-engine fighter" in India*

*By Ajai Shukla*

In a big step towards defence indigenisation, the Indian Air Force (IAF) has issued Hindustan Aeronautics Ltd (HAL) a tender for 83 Tejas light combat aircraft (LCA).

Late on Wednesday, HAL issued a brief note stating: "HAL has received Request for Proposal (RFP) for 83 LCAs from Indian Air Force."

Earlier on Wednesday, the defence minister stated in a written reply in Parliament: "Defence Acquisitions Council (DAC) has cleared acquisition of 83 LCA Mk 1A for IAF, production of which is planned from 2019-20..."

With HAL sources placing the ticket price of the Tejas Mark 1A at about Rs 400 crore per aircraft, the 83-fighter deal would generate Rs 33,200 crore worth of business to HAL and a range of Indian and foreign upstream suppliers.

At present, HAL is struggling to establish Tejas manufacture for 40 fighters already on order – 20 fighters in the initial operational configuration (IOC); followed by another 20 in the final operational configuration (FOC), when that is obtained.

Acknowledging the manufacturing delay in Parliament on Wednesday, the defence ministry stated: "Out of total 20 IOC aircraft (16 fighters and 4 trainers), 5 fighters have been delivered by HAL to IAF till date. The production of remaining 15 IOC aircraft (11 fighters + 4 trainers) are taken up at HAL."

Further, "Production for 20 FOC aircraft, will be taken up after FOC clearance by Aeronautical Development Agency (ADA)."

While HAL builds these 40 Tejas Mark 1 fighters, it is also working on four major upgrades that will transform the current version of the fighter into the Tejas Mark 1A, of which 83 will be built.

Of the four upgrades, the two most operationally vital involve integrating the fighter with "active electronically scanned array" (AESA) radar, in place of the Tejas Mark 1's manually scanned Israeli Elta EL/M 2032 radar; and integrating a "self-protection jammer" (SPJ) that is carried in an external pod under the Tejas' wing.

Two other upgrades – improving the "maintainability" of the fighter, and fitting it with external refuelling capability – are already well in hand.

The defence ministry told Parliament today that, to introduce the Tejas into service in larger numbers, a second production line was being set up. "For ramping up production capacity from existing 8 aircraft to 16 aircraft per annum, Government of India has sanctioned Rs 1,381.04 crore in March 2017".

Despite these measures, indigenous production of the Tejas would be insufficient to meet the IAF's requirements, given the likely phasing out of ten squadrons (210 aircraft) of MiG-21s and MiG-27s this decade.

The ministry told Parliament: "In order to bolster the fighter squadron strength, Government of India has also planned to manufacture fighter aircraft through Strategic Partnership model."

The Strategic Partnership model envisages selected private sector firms building defence platforms in India in partnership with a selected foreign vendor that transfers technology to manufacture here.

The IAF has already sent out enquiries for building a “single-engine fighter” in India, for which Lockheed Martin is fielding its F-16 Block 70 fighter, and Saab is offering the Gripen E.

Wed, 20 Dec, 2017  
(Online)

## IIT Delhi-DRDO project to develop smart jacket for army



The Indian Institute of Technology-Delhi (IIT-D) and the Defence Research and Development Organisation (DRDO) are jointly developing a lighter, smart, intelligent and relatively cheaper jacket for soldiers with integrated interconnects, antennas, sensors and chips. It is being developed at IIT-D’s Joint Advanced Technology Centre (JATC) set up by DRDO.

More than a dozen researchers at the JATC research vertical Smart and Intelligent Textile are working on developing the jacket in three phases, according to the IIT-D website.

Textile-based flexible circuit boards and multi-chip modules will be developed in the initial stage. Next, modelling, fabrication and testing of different types of radio frequency and microwave antennas on textile-based and polymeric substrates will take place.

Finally, several kinds of sensors will be developed and integrated into the textiles. Features like signal processing chip, chemical sensor and communication chip will help the soldiers in mobility, threat detection and communication. (DS)

## सेना के लिए गोला बारूद बनाने का काम निजी कंपनियों के हवाले

नई दिल्ली, प्रेढ़: चीन के साथ हुए डोकलाम विवाद और पाक की तरफ से लगातार दिख रहे खतरे के बीच सेना को सशक्त बनाने का काम सरकार ने शुरू कर दिया है। इसके पहले चरण में सेना के लिए आठ तरह के गोला बारूद बनाने का काम निजी कंपनियों के हवाले किया गया है।

सरकार का दावा है कि इससे विदेशों पर निर्भरता कम होगी तो स्वदेशी रक्षा उद्योग ताकतवर बनेगा। धन की बचत होगी, निजी कंपनियों का शक्तिशाली बनना देशहित में होगा। पिछले समय में यह बात सामने आई थी कि सेना के पास पर्याप्त मात्रा में गोला बारूद नहीं है। सेना सरकार पर दबाव डाल रही

थी कि इसके लिए तत्काल व्यवस्था हो। रक्षा मंत्रालय का कहना है कि हाल ही में रणनीतिक साझेदारी मॉडल को हरी झंडी दिखाई गई थी। इसके तहत भारतीय कंपनियां विदेशी भागीदारों के साथ मिलकर लड़ाकू विमान, हेलीकॉप्टर, पनडुब्बी व टैंक बनाने जा रही हैं।

## Business Standard

## L&T Shipbuilding hopes to double exports by 2022

By Aditi Divekar

With domestic defence and shipbuilding order flow drying, L&T Shipbuilding will be focusing on doubling its export revenue share by 2021-22.

“We will be done with all our orders in 2019, once we finish the seven offshore patrol vessels (OPVs) order the same year,” Jayant D Patil, senior executive vice-president (defence), told Business Standard. “Since there is no revenue visibility from the domestic market (defence and shipbuilding) in the next two years, we will be scouting far more aggressively in the export market and increase our dependency on export orders.” Patil is also a wholetime director on the L&T board.

Currently, of the total revenue stream in L&T’s shipbuilding segment, exports contribute 6-7 per cent. However, by 2021-22, the aim is to raise the export order contribution to 15-20 per cent.

L&T Shipbuilding is part of the \$17billion Larsen & Toubro, the engineering and technology giant. It has two main revenue streams, defence & aerospace and shipbuilding. Under the defenceaerospace segment, it has four verticals— submarines, guns & missiles, military communication and weapons & engineering systems. The shipbuilding segment comprises construction of ships such as OPVs and warships, and the repair segment, also termed refit.

The company still hopes to also get some major orders from the defence segment, in the pipeline for a longer than expected period. “We are awaiting contracts for landing platform/dock (LPD). We are hopeful it will come in the next two months. Ideally, it should have come a year back,” said Patil.

LPD is an amphibious warfare ship, generally designed to transport troops into a war zone. It also has the capability to transport helicopters.

“Warships and submarines are other areas where we are very bullish in times to come. We see opportunities in at least two submarine programmes but are uncertain on the time frame. We hope at least one of these will happen in the next two to two and a half years,” Said Patil.

### Defence Biz plan

- To double export orders over the next 3-4 years

- Sees huge opportunities in submarine, warship segment
- Does not see defence turning into profits soon
- Company bullish on defence segment in long-term two to two and a half years,” said Patil.

Overall, L&T has been waiting for some multi-crore defence projects to take off for quite some time. It hopes for orders here, generally in the range of ~50,000-60,000 crore.

L&T has a shipyard at Kattupalli near Chennai in Tamil Nadu and in Hazira, Gujarat. With regard to its high-margin ship repair business, the company sees strong spillover as a large number of ships from the navy are likely at the refit facilities of government-owned and private shipyards. “I am hoping the navy makes some decisions next year and there would be more need for refits (repair). Public sector yards like Mazagaon and Vizag are now full; so, there is scope for us to get these orders. Repair has better margins but volume is lower,” said Patil.

L&T Shipbuilding’s revenue contribution to the group is still miniscule. However, it has big hopes on large orders from the defence sector, where it sees unending opportunity in the longer run.

“For the L&T consolidated balance sheet, we have revenue visibility over the next four financial years and it might be reaching ~175,000-200,000 crore. But, for shipbuilding to contribute even a minimal 10 per cent would mean reaching ~20,000 crore, which will not happen soon. However, shipbuilding for us is a very clear decision and we are bullish in the long term,” he explained.

L&T Shipbuilding is one of the few private shipbuilders that is doing well; peers Bharati Shipyard and ABG Shipyard have been in deep financial trouble for a while.

The Anil Ambani-led Reliance Naval and Engineering has not made any major headway in terms of orders since it bought stake in Pipavav Defence and Offshore Engineering in 2015.



*Wed, 20 Dec, 2017  
(Online)*

## **Indigenous tech is need of the hour: Aatre**

*By Sudha Nambudiri*

KOCHI: Technology should not be restricted to just space, defence, aerospace sectors, etc. It should include other areas like agriculture, education, consumer electronics and so on. "To ensure this happens, we have to bring in indigenous technology," said V K Aatre, former director general of Defence Research and Development Organization (DRDO).

One method, he said, could have been the Make in India, but "I don't understand it. I hope somewhere along the line, it will incorporate the Made in India too. Otherwise it is a gimmick, because it seems to be oneman's vision and it has not percolated down. Unless that happens, it has no meaning," said Aatre who was in Kochi recently to participate in the 65th annual day celebration of NPOL, a DRDO lab.

"Prime Minister Narendra Modi deserves a lot of appreciation as he was the first to talk about Make in India. Nobody had propounded such a vision. Most of us are cautiously optimistic. But it has not reflected beyond the top level. Percolation takes time, so in a few years we will probably see the results," he said.

Aatre, former scientific advisor to defence minister, had headed a Task Force when Manohar Parikkar was the minister for detailing the criteria for selection of strategic partners for defence production within the Indian private sector.

"We were given three months to come out with the report, but I think it has not been implemented. There was a lot of objection and reluctance to implement that report as it involved reorganisation of the ministry of defence itself," Aatre said.

The report has defined the rules for selection of a strategic partner for the defence production.

"Effectively, any company that wins the bid will have a monopoly for 20-25 years. So it is like having a private defence PSU. We suggested that if a company bid for one major system, they cannot bid for another.

The reason being simple, you can't put everything in one basket. Our committee suggested that there should be financial and technological limitations- for example, the company can't have a factory in China or Korea if they are investing in defence sector. In case of any other sector, it doesn't matter," he added.

He expressed hope that if the report is not implemented in a certain time, the parameters will change. "We are enamoured by foreign products. But we should develop our own technologies. There is no dearth of talent in India. Silicon valley is the global example."

The former DRDO chief was dismayed at the recruitment freeze for several years in the organisation which will have an impact on the technology development.

"For every recruitment freeze, the gap will continue. This must be addressed. The average age of people in a research lab should be 35-45 years. Those are the best productivity years in a person's life," he added.

## THE ASIAN AGE

Thu, 21 Dec, 2017

### Nasa's next mission: 3-year stay on Mars

**Washington:** Nasa is calling for research proposals that can help understand the health effects of long term space travel on astronauts, in order to prepare humans for a three-year long journey to Mars.

Nasa's Human Research Programme is seeking research proposals in several topic areas.

Such research will help Nasa establish a baseline for proposed deep space missions up to 400 days in length as well as understand, prevent, diagnose, treat, mitigate, and cure the potential health effects of prolonged space-flight.

"To draw any conclusions about the cumulative effects of exposure to space, we need to observe more astronauts spending larger amounts of time in

#### NEW TEST

▶ Nasa's Human Research Programme is seeking research proposals in several topic areas

▶ Such research will help Nasa establish a baseline for proposed deep space missions up to 400 days

▶ The findings may also support innovative diagnostic on Earth

the space environment," said John Charles, associate director for Exploration Research Planning of the Human Research Program at Nasa's Johnson Space Center.

"Scientists can use the information to predict

physical and behavioral health trends," said Charles. Research from the selected proposals is expected to build upon data collected during the first one-year mission when astronauts Scott Kelly and Mikhail Kornienko spent nearly a year in space.

Additional space station studies, supplemented with research conducted at analogues on Earth, will allow Nasa to accumulate a more comprehensive biomedical, behavioral, and performance health dataset.

The findings may also support innovative diagnostic and behavioral approaches on Earth.

Proposals have to be submitted by January 4 next year.

— PTI

Thu, 21 Dec, 2017

## For the first time in 100 years, Indian Science Congress put off over fears of protests

*Anticipating protests from students of Osmania University, where the 105th edition of the event was to be held from January 3-7, the university expressed its inability to host due to “disturbances on its campus and other reasons”.*

FOR THE first time in its over 100-year-old history, the Indian Science Congress (ISC), an event that is on the Prime Minister’s calendar in the month of January, has been postponed.

Anticipating protests from students of Osmania University, where the 105th edition of the event was to be held from January 3-7, the university expressed its inability to host due to “disturbances on its campus and other reasons”.

The ISC’s postponement was conveyed in a communique from the Ministry of Science and Technology, based on information received from Dr Achyut Samanta, General President of the Indian Science Congress Association (ISCA). The Science Congress is the largest annual congregation of Indian scientists.

It is learnt that security officials anticipated protests from students of Osmania University against Prime Minister Narendra Modi over the issue of Dalits and minorities, and Telangana Chief Minister K Chandrasekhar Rao over lack of government recruitment in the newly formed state.

“Only last night (Tuesday night) the vice-chancellor of Osmania University informed us that it would not be possible to host the Science Congress on the scheduled dates because of disturbances on the campus... One student has committed suicide and there are some other reasons as well... The news has come as a shock for us. It has never happened earlier,” Prof Gangadhar, general secretary of ISCA, told The Indian Express.

Tempers are running high among students in Osmania University, where a 21-year-old MSc (Physics) student Eramina Murali committed suicide on December 3. Murali wrote in his suicide note that he was unable to cope with academic stress, but students claimed it was a result of the anger and discontent over lack of government jobs after the creation of Telangana.

As the situation continues to be tense in the university, sources said the Chief Minister was informed by security officials that there may be protests during the Science Congress, and it may be disrupted. This was also conveyed to the Union Ministry of Science and Technology.

However, when contacted by The Indian Express, the university’s Vice-Chancellor Prof S Ramachandran said he was unaware of the postponement. “Nothing is confirmed yet. Maybe by Thursday we will be able to give a statement,” he said. He declined to comment when asked if alternative venues were being considered.

ISCA’s Gangadhar said that an “emergency meeting” of the executive council had been called for December 27 to discuss the next course of action. “The university has informed us at such a last moment... Just a few days ago, our team had gone to the university to see the arrangements being made, and everything seemed well on track. But we will now have to find a way,” he said.

On Tuesday, Hyderabad Police Commissioner V V Srinivasa Rao visited the campus to inspect the ‘A’ and ‘C’ grounds where the Science Congress was supposed to be held.

“After the inspection, he was informed about a meeting of Dalit, Backward Caste, Minority and Left students’ organisations in which they resolved to protest the presence of Modi and KCR on the campus. Accordingly, a report was sent to the state and central governments stating that trouble was expected in the campus during the congress,” a top official said.

Gangadhar said it was possible to organise the event at another venue anytime before March 31 next year. “These decisions will have to be taken by the executive committee,” he said. The host and venue of the Science Congress are usually decided one year in advance.

Sources said university officials were looking at the Hyderabad International Trade Expositions (HITEX), where the Global Entrepreneurship Summit was held recently, as an alternative location. No decision has been made yet, they said.

“The Osmania University, which was established in 1917, is celebrating the centenary year and if the prestigious Science Congress is held outside the campus it would be not only an insult but also draw a tremendous amount of criticism. So nothing is decided yet. In spite of stiff competition from other universities, it was decided to hold the event this year at Osmania. We cannot shift the venue,” an official said.