

Committed To Defence And Security Worldwide

DEFENCE & SECURITY ALERT

FEBRUARY 2019 | VOLUME 10 | ISSUE 05 | ₹150

The First and Only ISO 9001:2015 Certified Defence and Security Magazine in India
The Only Magazine Available On The Intranet Of Indian Air Force

www.dsalert.org
info@dsalert.org

LCA TEJAS



2019

AERO INDIA

The Runway to a Billion Opportunities
20th-24th Feb 2019, Bengaluru



THE FIRST CHOICE IN THE DOMAINS OF
DEFENCE, SECURITY AND WORLD AFFAIRS
WORLDWIDE

9 YEARS OF EXCELLENCE





MISSION

We endeavour to sound **ALERTS** and create **AWARENESS** about the myriad dimensions and manifestations of **DEFENCE** and **SECURITY** in India and around the world.



The power of a King lies in his mighty arms...

Security of the citizens at peace time is very important because State is the only saviour of the men and women who get affected only because of the negligence of the State.

- Chanakya

DSA IS AS MUCH YOURS, AS IT IS OURS!



When India purchases off-the-shelf aircraft like Rafale, its domestic programmes like the Light Combat Aircraft, Tejas, suffer. It suffers both in terms of delays in development as well as inadequate funding. The cost escalation of LCA Tejas is often quoted as one of its shortcomings. While it is certainly true that the cost has escalated well beyond the initial estimates and sanctions. But such escalation is, firstly, not unique to the Tejas project, and it also has to be seen in the correct context of its figures. There are various reasons, known and unknown.

Almost every advanced country, with a combat aircraft development programme, has suffered inordinate delays and price overruns. Even the most experienced countries, with a history of aircraft design, development and manufacturing, suffer from this issue. There is virtually no programme that has not had to rewrite its audit books to correct figures, including the most advanced fifth-generation stealth fighters. But those countries and their developing companies still persist, with patience and perseverance, to get the aircraft in the air, to serve the country.

Panning the Tejas project, therefore, for this shortcoming is ignorance at best, or wilfully motivated at worst. It got delayed for the simple reason that the country sought to develop a combat aircraft in a period when the technological world was on the cusp of a major revolution. Advances were occurring at a rapid pace, outdated what was once considered modern in no time at all. As a result of which expectations of how the Tejas should fly, and what its capability should be, kept changing as new technologies became available, constantly. In simple words, the goal posts were shifted, continually, and so often as to make the task of developers virtually impossible. Not surprising.

India once did the same earlier, with the HF-32 Marut, Asia's first supersonic combat aircraft. Yes, India was indeed the first country in Asia to make an indigenous combat aircraft that could fly at supersonic speeds. But just because it was a fast aircraft didn't make it the best, and because it wasn't the best, the project was shelved even before subsequent versions could be developed. The baby was indeed thrown out with the bath water, and years later, India decided to begin all over again with the Tejas project. Having cleaned its cupboard bare, it decided to begin from scratch.

The delays were only to be expected as were the cost overruns. What should have been kept in perspective, from the inception of the programme, was that technology was no longer the monopoly of state run institutions. This is what the developers of Tejas hoped to underline. So, even as they wrestled with new breakthroughs in design, materials et al, Indians employed elsewhere were achieving greater technological milestones. A fusion of efforts from the inception would have accelerated the programme, whilst helping spread the technological net wider. The same can still be done with manufacturing the Tejas, and roping in other players from the private sector too.

India needs to manufacture more squadrons of the Tejas per year than its current capacity. That can only happen if the private sector is roped in. Which would also bring in greater expertise to revise subsequent versions of the Tejas, because there have to be follow on makes in years to come. India has no choice but to develop the Tejas over the next few decades, in various versions, so as to take care of its combat fleet. No amounts of imports can compensate for the strength of a domestic programme which is also a fact known world over.

Manvendra Singh

Chairman Shyam Sunder
Publisher and CEO Pawan Agrawal
President Urvashi J Agrawal
Director Shishir Bhushan

Editor-in-Chief Manvendra Singh

Copy Editor
 Vandana Bhatia Palli

Art & Creative
 Dolly Jain

Representative (J&K)
 Salil Sharma

Correspondent (Europe)
 Dominika Cosic

Production
 Dilshad and Dabeer

IT Operations
 Amber Sharma

Administration
 Sourabh Chauhan

Photographer
 Subhash

Legal Advisor
 Deepak Gupta

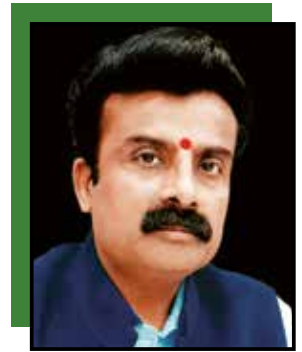
E-mail: (first name)@dsalert.org
 info: info@dsalert.org
 articles: articles@dsalert.org
 subscription: subscription@dsalert.org
 online edition: online@dsalert.org
 advertisement: advt@dsalert.org

Editorial and Corporate Office
 Prabhat Prakashan Tower
 4/19, Asaf Ali Road
 New Delhi-110002 (India)
 +91-011-23243999, 23287999, 9958382999
 info@dsalert.org | www.dsalert.org

Disclaimer
 All rights reserved. Reproduction and translation in any language in whole or in part by any means without permission from Defence and Security Alert is prohibited. Opinions expressed are those of the individual writers and do not necessarily reflect those of the publisher and/or editors. All disputes are subject to jurisdiction of Delhi Courts.

**Defence and Security Alert is printed, published and owned by Pawan Agrawal and printed at Bosco Society For Printing, Don Bosco Technical Institute, Okhla Road, New Delhi-110025 and published at 4/19, Asaf Ali Road, New Delhi (India).
 Editor: Manvendra Singh**

LCA TEJAS: IS IT SUFFICIENT FOR INDIA?



With never-ending assaults on India's territorial integrity from the very moment of our tryst with destiny, the nation has learned hard lessons in the defence of national sovereignty. Yet while we have made admirable strides in the automobile, telecommunications, atomic energy, and space, we are still heavily dependent on arms imports for national security.

This dependence is most noticeable in military aviation where different types of aircraft have been bought from different sources forcing the nation to rely heavily on imported spare-parts and maintenance support at crucial junctures. The latest deal for the acquisition of the French Rafale fighter aircraft has drawn the spotlight on indigenously designed and developed Light Combat Aircraft, Tejas. The question that has come to the fore is: If we can produce the money to pay foreign original equipment manufacturers, why cannot we invest the same at home and create a viable military-industrial complex through public-private participation?

After observing the prevailing controversies on the procurement of Rafale, the big question related to the national security arises in the mind of every Indian about the reasons that have stopped us to develop the indigenous defence aviation industry in India. After independence, the country has developed and associated with all the best technologies in the world even in the face of international attempts to prevent us to pursue a chosen path. That is why the failure to achieve self-reliance in the short term and self-sufficiency in the long term (as happened in missile development) is so galling.

If our defence industry would have also developed in the same speed, then I am sure that our mischievous neighbours would not have bothered us the way they are currently doing. In fact, this is a matter of concern as well as deep study as under what circumstances the speed in the defence production has not taken the required pace.

The requirements for all the three Armed Forces are huge and we just cannot rely on the import of each and every thing for very long. Some efforts by DRDO, Mazagon Dockyard and HAL have been made to develop military platforms but we remain the largest importer of weapons and munitions.

We see some hope in the indigenous Tejas. The test flights of Tejas have been successful and serial production has begun to meet the requirements of the Indian Air Force and the Indian Navy.

However, bulk production of military equipment of different kinds cannot fructify until the government arranges funds and encourages joint ventures within the PPP model on a clearly laid and transparent plan. (One of the contentious issues is the manner in which the French firm selected a particular Indian company for collaboration in the Rafale deal).

Tejas could become the nucleus of a resurgent Indian military-industrial complex.

This edition is focused on Tejas because we all are proud of its success story. Our eminent contributors have highlighted the qualities of Tejas and how it can be a big support to national security.

Happy reading!

Pawan Agrawal
 CEO - DSA



CAN IT MAKE THE GRADE?
AIR MARSHAL SUMIT MUKERJI
PVSM, SC, VSM (RETD)

04

**INVEST MORE FOR
INDIGENOUS GROWTH**
ARUN VISHWANATHAN

08

CHALLENGES AND OPTIONS
AIR MSHL ANIL CHOPRA
PVSM, AVSM, VM, VSM (RETD)

12

TRYST INTERRUPTED
CMDE(RETD) RANJIT B RAI

18

AMCA – ITS PROSPECTS
GP CAPT AK SACHDEV (RETD)

22

**INCREMENTAL
LEARNING EXPERIENCE**
CMDE R S VASAN (RETD)

26

**GAME CHANGER FOR
IAF AND NAVY**
PROF ARVIND KUMAR

30

TEJAS- A SUCCESS STORY?
BRIG DR ANIL SHARMA (RETD)

34

**MODEL FOR VIABLE
MILITARY INDUSTRIAL COMPLEX**
TEAM DSA

42

TIME FOR INDIA TO REVIEW
MAJ GEN ASHOK HUKKU
YSM (RETD)

44

A CURSE ON THE NORTHEAST
MONALISA GOGOI

48