



Book Review

Indian Air Force: The case for indigenization

Sourav Gain¹

¹Department of Aerospace Medicine, Institute of Aerospace Medicine, Bengaluru, Karnataka, India.



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***Corresponding author:**

Sourav Gain,
 Department of Aerospace
 Medicine, Institute of
 Aerospace Medicine,
 Bengaluru, Karnataka, India.
gainisourav@gmail.com

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Review: Indian Air Force (IAF): The Case for Indigenization is a compilation of 15 separate scripts arranged in tandem which brings out the need for indigenization in each and every field of IAF.

The book takes us through the history post-independence of our country in indigenization, the challenges, forecasting trends of Aerospace power and the desirable mix of platforms by 2025, the major hurdles in force modernization and indigenization, the consequences of ignoring Research and Development (R and D) in IAF, the technical and operational requirements of Joint Operations, the cause of lack of indigenization of Air-Launched Weapons, the result of ignorance to organic design and development capability, IAF research to operationalization – the strategic directions, building resource efficiency where a case study of armaments has been described, air intelligence in future wars, emerging missile threats, the future trend of Maintenance, Repair, and Overhaul (MRO), and IAF and building air dominance.

The chapter by Air Cmde Jasjit Singh brings out difficulties in setting up of independent Directorate in IAF as was formed by Indian Navy to carry out Research and Development (R and D) in indigenization. He pointed out the lack of coordination between Aeronautical Development Agency (ADA) and Hindustan Aeronautics Limited (HAL). He found out percentage of Gross Domestic Product (GDP) spent on Defense R & D for India was only 0.8% where the major contributor was government and there was a lack of participation from the private sector.

Air Mshl P. K. Mehra speaks about the role of airpower in war-winning in air and space platforms and the importance of the development of Unmanned Aerial Combat Vehicles and Unmanned Aerial Vehicles along with combat support elements indigenously where India is lacking. An urgent need was foreseen by him in institutionalizing the process of periodic defense reviews to develop military power as part of the strategy and not directionless based on available resources and technology.

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Air Mshl N. V. Tyagi contributes that all acquisitions towards modernizing the IAF inventory to cope up with the multidimensional and multipoint threat where India is emerging as a great regional power, have to be well planned and in a phased manner. Acquisition of a new platform and upgrading the existing fleet should be time-bound. For this continued budgetary support is required. Another important aspect that he mentions is the strategic requirement for indigenization of our R and D for self-reliance in defense production for which adequate administrative infrastructure and budgetary support holds prime importance.

Air Mshl A. K. Nagalia has described major hurdles in modernization and indigenization in IAF to be obsolescence and difficulty in its combat force levels. Another aspect is reliance on imported combat assets and support systems. Prioritization and progress of various Design and Development (D and D) projects should be the mainstay for an increase in self-reliance. The huge potential of the private sector needs to be exploited and to do away with the archaic training curricula and personnel policies and give way to modern simulation-based curricula and scientific Human Resource Development (HRD) policies. Furthermore, he has penned down the importance of the organic D and D capability of an Air Force and how it leads to in-house solutions to various emerging threats. He also substantiates indigenous D and D and that future acquisitions should be based on proven concepts rather than wishful thinking.

Gp Capt S. S. Sharma emphasized the technical and operational requirements of Joint Operations.

Gp Capt S. Bhanaji Rao scribbled about the failure of Indian R and D to produce air armaments whether sophisticated or basic. The private sector has the capability of development of complex software. This resource if tapped will lead to the production of world-class products. He mentioned the requirement of integration of the Ministry of Science and Technology and the Ministry of Defence and involvement of the IAF in coordinating the system.

Air Mshl T. M. Asthana brought out the requirement of the development of an integral organization within IAF to contribute to research in two distinct fields – first to forecast future requirements in aircraft modernization and second suggest upgradation and modifications in weapon systems and supporting infrastructure thereby collaborating technological superiority with information dominance in time and space.

Gp Capt Manoj Kumar has emphasized on distinguishing armament stores at the time of the initial contract into training stores and combat stores. He suggested the procurement of realistic simulators for training thus avoiding the wastage of armaments and being cost-effective. He also stressed on correct storage and transportation of armament

which will ensure the prevention of their life, and ensure the safety of stores, and handlers.

Shri Shiv Ram Krishna Pande penned down the importance of Air intelligence in future wars where he emphasized on acquiring basic spectral bandwidth for military purposes. He stated “Unless and until the country possesses the required electromagnetic spectrum and the corresponding bandwidth, it does not matter how expensive or state of the art the intelligence system is. It is like buying the best cellular handset available in the market enabled with best service provider, but without any signal coverage.”

He stressed the training of manpower in handling such systems sitting at the command and control center, training to be imparted to make the “right call at the right time.” Integration of various sensors is the key to success of delivery of information with least delay.

Ms. Deblina Chatterjee has emphasized the role of ballistic missile, modeling its threat, presenting array of missile capabilities of our adversaries, and ways to mitigate the threat – by enhancing our military capabilities.

AVM A. Agrawal takes us through the journey of an aircraft after certification of airworthiness on completion of its D and D phase. MRO are the steps necessary to be taken to ensure airworthiness. He described the present status, the IAF philosophy and the way ahead-public-private partnerships.

Completing the circle, Air Mshl T. M. Asthana speaks about Air Dominance without which no operation can be sustained. Air superiority, command, and control along with air dominance complete the loop where each component plays a part and ultimately contributes to air dominance.

Opinion about the Book: A well-compiled book with enthralling facts about the intricacies and complex problems within the organization and the Ministry as well the Government as a whole. It brings out the relation between various sister organizations within the Ministry of Defence, other ministries, and Defence Public Sector Undertakings as well as the Defence Research Development Organization and the powers of IAF from which it is deprived and if given what advances in all fields leading it to reach the status of air dominance.

Recommendation: This book is a compilation of experience and suggestions of senior retired Air Officers and fellows from the Centre for Air Power Studies which gives a broad outlook about the emerging problems and their most possible solutions in each aspect of the advancement and development of the IAF which ultimately culminates to empowering it the status of Air Dominance. Easy to read and very well edited, “India’s Most Fearless” is a must-read to

gain knowledge about internal details about varied problem sectors in IAF toward indigenization and discussions and solutions to them. Highly recommended. It is a book that will help shape future leaders.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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