ENERGISING INDIAN AEROSPACE: THE CHANGING ENVIRONMENT

ADDRESS BY THE CHAIRMAN, CHIEFS OF STAFF COMMITTEE (COSC) AND CHIEF OF THE AIR STAFF, AIR CHIEF MARSHAL ARUP RAHA, PVSM AVSM VM ADC

INTRODUCTION

Air Mshl Vinod Patney, director general, Centre for Air Power Studies (CAPS), Shri T Suvarna Raju, chairman, Confederation of Indian Industries (CII) National Committee on Aerospace, and Chief Managing Director (CMD), Hindustan Aeronautics Limited (HAL), Shri Sujith Haridas, Shri SP Shukla, former air chiefs, distinguished members from the Indian corporate sector and aviation industry, serving and retired officers from the army, navy and Indian Air Force (IAF), ladies and gentlemen. I wish to convey warm greetings of the day to everyone present here. It is, indeed, a privilege and an honour to be here this morning amongst such a distinguished and eminent audience to talk on "Energising Indian Aerospace: The Changing Environment".

THEME OF CONFERENCE

The theme of the conference is apt and contemporary considering the revitalised initiative on 'Make in India' and enhanced focus on the growth of the Indian aerospace industry. This initiative, coupled with the rapidly

---

Air Chief Marshal **Arup Raha** PVSM AVSM VM ADC is the Chairman, Chiefs of Staff Committee (COSC) and Chief of the Air Staff, India.

expanding Indian aerospace market, both military and civil, is likely to generate a huge demand for aerospace platforms, propulsion systems, avionics, aero-structures, simulators, other equipment and Maintenance, Repair and Overhaul (MRO) services. Such seminars will go a long way in understanding the issues involved, germinating new ideas, making recommendations and a roadmap to bolster India's efforts in developing a self-reliant aerospace industry. The growth projections for the aerospace industry in India are staggering, given the likely economic growth trajectory and India's security concerns and demographic realities. India will be the most populous country soon, with a large young workforce, a bulging middle class with rising aspirations, and a sustained economic growth, and this will boost civil aviation exponentially, connecting the 2nd tier of cities and metros.

HISTORICAL LEGACY

India always believed in peaceful coexistence and economic development. The foreign policy too focussed on the Non-Aligned Movement (NAM) and the role of military power, which includes aerospace power in Comprehensive National Power (CNP) to deter conflicts and maintain a conducive environment for economic growth, was, at times, underplayed. Civil aviation was considered a luxury, meant only for the rich and the powerful which stunted its growth potential.

INDIGENOUS EFFORT

Post independence, a lot of effort was in place to achieve self-reliance in defence hardware and several Defence Research and Development Organisation (DRDO) laboratories and Defence Public Sector Undertakings (DPSUs) were established. However, self-reliance in core technologies, especially in the aviation sector could not be achieved, despite HAL being the biggest aviation sector industry in the region. On the other hand, the success achieved by the Indian Space Research Organisation (ISRO) can be attributed to adequate funding, fast track approval of projects, and good leadership, with expert domain knowledge.

WHY INDIGENOUS?

As India's economy grows and her 'Comprehensive National Power' increases, India will be called upon to play a greater role in global affairs. India is well on her way to becoming a regional power and in the near future, would transform into a global power. With growing power comes greater responsibilities and we are already seeing this, as India is looked upon as a 'net security provider' in the Indian Ocean Region. To be a credible power, India needs to have a diverse range of capabilities of which aerospace capability is a key component. With its unique characteristics of flexibility, responsiveness and reach, aerospace power is more often than not, the preferred option for the nation's leadership for expeditiously mitigating emergent security challenges and contingencies, in both war and in peace. India is recognised as a leader in Humanitarian Assistance and Disaster Relief (HADR) operations because of its strategic reach through aerospace capabilities. The C-17, C-130, IL-76 and medium lift helicopters have conducted intensive and extensive HADR operations both within the country and abroad. The very nature of aerospace platforms and associated equipment, both military and civil, makes it the incubator of leading edge technologies and manufacturing processes. It is imperative that we as a nation are self-reliant in a majority of these core technologies. Only then can we attain true strategic autonomy and meet our aim of being a credible aerospace power.

INDIGENOUS DEFENCE INDUSTRY

India continues to be one of the largest importers of defence equipment. Even for the defence equipment and systems that are produced within the country, there is a sizeable dependency on foreign Original Equipment Manufacturers (OEMs) for their sub-systems and components. The story remains similar in the civil aviation sector. Reliance on substantial imports also has costs other than loss of strategic autonomy. It results in a significant portion of the defence budget getting consumed towards procurement from foreign OEMs. With the high cost of imported defence equipment and reducing defence budgets, this adversely impinges on the

numbers that can be procured and, hence, on our capacity development. In addition, associated spinoffs like generation of employment in a country with a large demographic bulge, technology gain in critical sectors, and commercial and strategic gains from export of defence equipment are lost.

ENVIRONMENT

The lack of adequate growth in the aerospace sector was due to many environmental factors like lack of technology available in the country, inadequate capital to invest in projects, inadequate infrastructure and, most importantly, lack of research and innovation. However, the environment has changed substantially in the recent times, due to various policy initiatives that have been taken by the government as well as by the IAF in this regard.

GOVERNMENT POLICIES AND INITIATIVES

The 'Make in India' initiative has been path-breaking in its vision of enhancing indigenous manufacturing capabilities. In addition, the new Defence Procurement Procedure (DPP-2016) and the amended Offset Policy would certainly facilitate a smoother transaction of procurement. The new policy addresses crucial challenges in defence procurement and creates a level playing field for the private sector. The introduction of the 'Buy-Indigenously Designed Developed and Manufactured' category, reducing the timeframe for Acceptance of Necessity (AoN) and the fast track route are expected to give a boost to the Indian industry. The policy to allow 100 percent Foreign Direct Investment (FDI) in the defence sector with government approval is also an important initiative. The government is also encouraging collaboration between the public and private sector companies for defence exports based on the Public Private Partnership (PPP) model. The strategic partners concept/model is another positive step taken by the Ministry of Defence (MoD) in creating capacity in the private sector. The policy framework for implementation of the strategic partnership model in aircraft, helicopters, submarines, armoured vehicles, and ammunition

including smart ammunition, is presently under formulation. The new policy on export of military equipment to friendly countries will provide a larger market for the industry.

IAF POLICIES AND INITIATIVES

I would also like to highlight the initiatives that have been taken by the IAF in this regard. Procurement of new equipment, maintenance and sustenance of legacy fleets and systems operated by the IAF offers a huge opportunity for indigenous development. The recent induction of the indigenous Light Combat Aircraft (LCA) 'Tejas' into the IAF and placement of orders for 120 Tejas aircraft is testimony to this initiative. In addition, the IAF has already inducted the HAL-built advance light helicopters in large numbers and will soon induct the light combat helicopters and HTT-40 basic trainers. The recent push by the IAF for manufacture of a modern transport aircraft in India by an Indian private sector company and the plan for the next fighter proposed for induction in the IAF to be through the 'Make in India' route are other big ticket projects on the anvil. The IAF is also wholeheartedly supporting and effectively contributing towards design, development and testing of indigenous weapons like the Astra, Nirbhaya and Aakash missiles, and several types of indigenous radars as well as communication systems.

To have greater clarity in the industry so that it can map its capability development with the requirements of the Indian Air Force, the 'Indigenisation Roadmap Indian Air Force (2016-2025)' was released in April this year during a seminar in Delhi, jointly organised by the IAF and CII. This was aimed at providing an insight into the IAF's indigenisation requirements for the next ten years and the opportunities it offers to the industry. This booklet has enabled the environment to get a better insight into the IAF's requirements and improved mutual interaction. As a result of concerted efforts, the IAF has been able to achieve indigenisation of more than 90 percent of the mandatory and Automatic Replenishment System (ARS) spares for a significant proportion of its fleets. However, many spares have not yet been indigenised due to either complexity of

the item or non-availability of the technology. There is still a large number of rotables and Line Replaceable Units (LRUs) for different aircraft fleets and systems, for which repair and overhaul facilities have not yet been set up in the country.

The defence MROs in the private sector in India are in an infant stage and need to grow at a much faster pace in the coming years. The concept of MRO is not new to the IAF and its Base Repair Depots (BRDs) perform the full range of MRO functions. These captive MROs were created as defence technology was exclusive and enough expertise was not available in the private sector within the nation. Also, we were bound by contract with the OEMs and Transfer of Technology (ToT) to Indian industry was constrained. However, now the situation has changed and creating a defence MRO in the private sector has not only become a reality but is also being facilitated by liberal government policies. Downsizing of the armed forces and improving the teeth-to-tail ratio is the order of the day: this would be achieved through outsourcing and long-term business commitments from the industry. The Indian industry has the opportunity to explore setting up of MRO facilities for the IAF in airframes and aeroengines, mechanical and electronic rotables, test equipment and ground support equipment and airfield safety systems.

INITIAL RESPONSE OF INDUSTRY ENCOURAGING

The impetus to increase the participation of indigenous industries has already started bearing fruit as several large domestic private sector groups and companies have entered the sector in the recent past. The business model should be based on long-term commitments and not immediate or short-term commercial benefits. Also, leading global OEMs have either established or are in the process of establishing their presence through Joint Ventures (JVs) with Indian companies. These are encouraging developments. However, to truly emerge as a credible aerospace manufacturing hub, many challenges still need to be overcome.

CHALLENGES

One of the biggest challenges for the aerospace industries would be the absorption of high-end niche technologies with which the aviation sector is closely associated. The industry would have to develop capabilities in terms of infrastructure and skilled and trained manpower. Another challenge is the non-availability of the required material and manufacturing technology in the country, especially for airborne equipment. Unless we develop these technologies within the country, we would remain dependent on foreign sources. Due to the very nature of its usage, aviation equipment has to meet highly exacting standards and stringent airworthiness certification. Accordingly, requisite quality assurance infrastructure would also have to be created. Indigenisation activity involves Research and Development (R&D), making it vulnerable to longer timeframes and uncertainties. The indigenisation efforts should have detailed planning and realistic timeframes projected so that fructification takes place in a timely manner. Delays in product deliveries have huge commercial significance for the civil aviation sector and even greater strategic and security ramifications for the air force and the nation. It is not viable for any single industry to start manufacturing finished aerospace products overnight. While the larger industries may be able to afford the funds and resources, the Medium, Small and Micro Enterprises (MSMEs) may not be able to afford them. Therefore, it is important for the larger industries to form an efficient supply chain through hand-holding of smaller MSMEs and create a self-supporting eco-system to sustain the product manufacturing.

CONCLUSION

The indigenous development and manufacturing of aerospace products is of great significance and needs to be pursued wholeheartedly. The environment is transforming, and enabling policies and initiatives by the government and by the IAF have set the stage. The concept of indigenisation in the IAF has metamorphosed into a broader idea that enables participative collaboration with the Indian industry. In our path

of transformation, we seek a high degree of availability, reliability and maintainability of all our assets. The industry needs to fully exploit the opportunities being created.

My compliments to the Centre for Air Power Studies and the Confederation of Indian Industries for having come together to address this pertinent issue. This conference may well be a catalyst in kick-starting a new era in indigenisation of vital aerospace technologies. Interactions such as these have the capability to grow into solid partnerships of the future and I invite all stakeholders to be our valued partners in this endeavour. Once again, I assure you of the unstinted support of the IAF and earnestly look forward to the emergence of a vibrant world class Indian aerospace industry.

Jai Hind!