



Confederation of Indian Industry



CONFERENCE ON
AEROSPACE & DEFENCE
MANUFACTURING TECHNOLOGIES
2nd Edition
Theme: Make In India – Fast Developing Ecosystem for Aerospace and Defence Industry

23 June 2017: Hotel ITC Grand Chola, Chennai

Retrospect Report

CII (SR) and TIDCO are jointly organized the 2nd Edition - Conference on Aerospace & Defence Manufacturing Technologies on 23rd June 2017 at Hotel ITC Grand Chola, Chennai with the theme of “*Make in India- Fast Developing Ecosystem for Aerospace and Defence Industry*”. And this conference was chaired by **Mr Jayakar Krishnamurthy**, Chairman & Managing Director, **UCAL Fuel Systems**.

The theme address by **Mr Jayakar Krishnamurthy**, Conference Chairman & Chairman and Managing Director, UCAL, said that the aerospace and defence needed four major things for growth, which included a vast land mass, abundant natural resources, sustainable population around and distribution of equitable economic growth.

He also said that the defence spending by Russia stood at \$ 84 billion whereas the US spent \$ 610 billion. The same way small nations like Germany, Japan, UK and Israel spent \$ 41 billion, \$46 billion, \$48 billion and \$ 17 billion respectively on defence. He said that India spent \$ 56 billion on defence notwithstanding its large size in area and population density. But when we compare on the R & D investment, Israel tops the list with 4.3% whereas India is the lowest at 0.9%. It is impossible for India to keep importing Defence equipments without making R & D investments. So he urged that the investments in R & D will lead to sustainable economic and defence growth.

Stating that India needed to develop an ecosystem similar to that of successful automotive industry model which comprises Tier 1, Tier 2, Tier 3 and R & D. He wanted a proper policy evolved in the sphere of “Design & Make in India” which would be the right way forward.



Mr B Elangovan, Managing Director, Tidel Park Limited, said that Tamil Nadu has emerged one of the leaders in manufacturing sector with its ecosystem allowing automobile majors set up shops in the state and thereby making Chennai as the Detroit of India. “Chennai Aerospace Park in Sriperumbudur situated on a 250 acre site would have in it 50 aerospace companies with a business opportunity for Rs 5000 crore.”

He also emphasized that “With this huge opportunity in this business in India, as of now only 10 per cent of the business has been tapped,” he added saying, “Chennai has all the capabilities in emerging as the preferred destination for MRO activity. We encourage any operator to set up an MRO unit anywhere in TN,” And also insisted that Tamil Nadu has a strong pool of skilled human resource with 5,000 aerospace engineers graduating from more than 70 engineering colleges and universities



Mr Sanjeev Chopra, IAS, Principal Secretary, Industries Department, Government of Odisha emphasised that people always merited Odisha as the land of opportunities and considered the place as the Eastern gateway to ASEAN. Also he added that “Odisha has a large pool of skilled

manpower and the biggest land mass for industrial estates and major industries in steel, aluminium and other ores for industrial purpose,”

Vice-Admiral B Kannan (Retd), Managing Director & CEO, L & T Shipbuilding Limited, also stressed on an ecosystem with a strong base for indigenization, manpower, financial empowerment and enabling a digital technology for enhanced productivity.

Mr Anil Kumar, General Manager, Engine Factory, Avadi, Ministry of Defence, Government of India, said that there are many companies in the manufacture of automated combat vehicles, rockets and equipment for the defence forces. He wanted public and private sector industries to involve themselves in the manufacturing of defence-related items, besides formulating an ecosystem for major indigenisation without relying much on imports.



This conference witnessed participation from Ordnance Factories, DRDO, Defense PSU and other Private Sector Industries. Delegation from Government of Odisha and over 200 delegates from India, Israel, Nigeria and USA took part in this conference which was supported by TIDCO (Tamil Nadu Industrial Development Corporation).



This conference covered 4 technical sessions and 1 panel discussion which are listed below with a short brief

Plenary Session 1: Potential growth of Aerospace and Defence R&D and Manufacturing

This session was chaired by **Mr S R Sridhara**, Deputy General Manager, Aerospace Division, **BEML** and the speakers are **Mr Tal Catran**, Marketing & Business Development, Expert Consultant, **MHT Israel Aerospace Industries Ltd.** Israel and **Dr R Asokan**, Professor & Head, Centre for Defence Technology Studies, **Hindustan University**

They emphasized India is one of the fastest growing aviation markets in the world, along with US, UK, Indonesia & China. The 'Make in India' policy of PM Modi had given the forecast a major boost, therefore India has both the ability and motive to remain at the world's top in aviation. And also establishing of Aviation Academy in India

Plenary Session II: Additive Manufacturing – Holistic approach for Aerospace & Defence Industry

This session chaired and addressed by **Dr A Velayudham**, Scientist F, Combat Vehicle Research & Development Establishment, **DRDO** along with speakers **Mr Anant Sadarjoshi**, Technical Consultant A&D, **Dassault Systèmes** and **Mr Umamaheshwar D**, Executive Chief Consulting Engineer, **GE Aviation**

They emphasized that Industrial IoT and big data are converging to enable demand-driven 'smart supply chains'. The advancements in 3D printing and 'Additive Manufacturing,' coupled with supply chain efficiencies, could make distributed manufacturing a reality. The promise of AM is the use of less material, lightweight alloys and to provide faster cycle time due to rapid prototyping. The AM processes would produce less scrap, address complex geometries and improve strength-to-weight ratios.

Plenary Session III: New Materials, Future Design, Advance Technology & Intellectual Rights.

This session chaired by **Mr Vasu Parthasarathy** Taskforce on Aerospace CII Tamil Nadu, Executive Director, **Natesan Synchrocones** and the speakers are **Ms Sandhya Mehta**, Principal, **DefX**, USA, **Mr Shyam Rao**, Senior VP - Industrial Ceramic Division, **Carborundum Universal Limited** and **Mr Syam Sunder**, Director Technology and Business Development, **MSC Software India**

They emphasized about the technology, Materials, Manufacturing feasibility, new types of Materials that require new technologies, uncompromising performance, Zero failure during operation of unmanned systems and the patterns rights for the components, materials developed, manufactured in India and also the challenges faced in Aerospace & Defense Industry considering recent global developments.

Plenary Session IV: Make in India – Opportunity and Challenges for OEM & MSME's

This session chaired by **Rear Admiral Pritam Lal**, Defence Expert CII and the speakers **Mr D Sathish Kumar**, Asst Works Manager, **Heavy Vehicles Factory**, Avadi, **Mr S Rangarajan**, CEO, **Data Patterns (India)**

Pvt Ltd and Mr R Saravana Kummar, Deputy General Manager, **National Small Industries Corporation Limited**.

They emphasized about the opportunities and challenges for MSME like Large Market size, create world class production & test infrastructure, Create world class production & test infrastructure, allowing “local” manufacturing infrastructure, Relationships with Large Corporates / OEMs. With the new policies and “Make in India” focus, it’s an exciting time for Indian Defence & Aerospace Industry. Defence Industry is complex, Till date the Industry is only Government driven

Panel Discussion: **Does Transfer of Technology through PPP model strengthen MakeInIndia Initiative.** This discussion chaired and discussed by **Air Marshal Simhakutty Varthaman PVSM, AVSM, VSM** and co panelist are **Mr Pritam Lal**, Defence Expert, **CII**, **Mr Shekar N.** President, **Aerospace Industry Development Association of TamilNadu (AIDAT)**, **Mr Venkatesh Chandrasekaran**, Director - **CVIAC Consulting Private Limited**, Chairman & MD at **VinMn Aerospace**