



CEMILAC

Centre For Military Airworthiness & Certification



DESIGN DEVELOPMENT AND CERTIFICATION
OF MILITARY AIR SYSTEMS AND STORES



MINISTRY OF DEFENCE
GOVT. OF INDIA



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About

CEMILAC

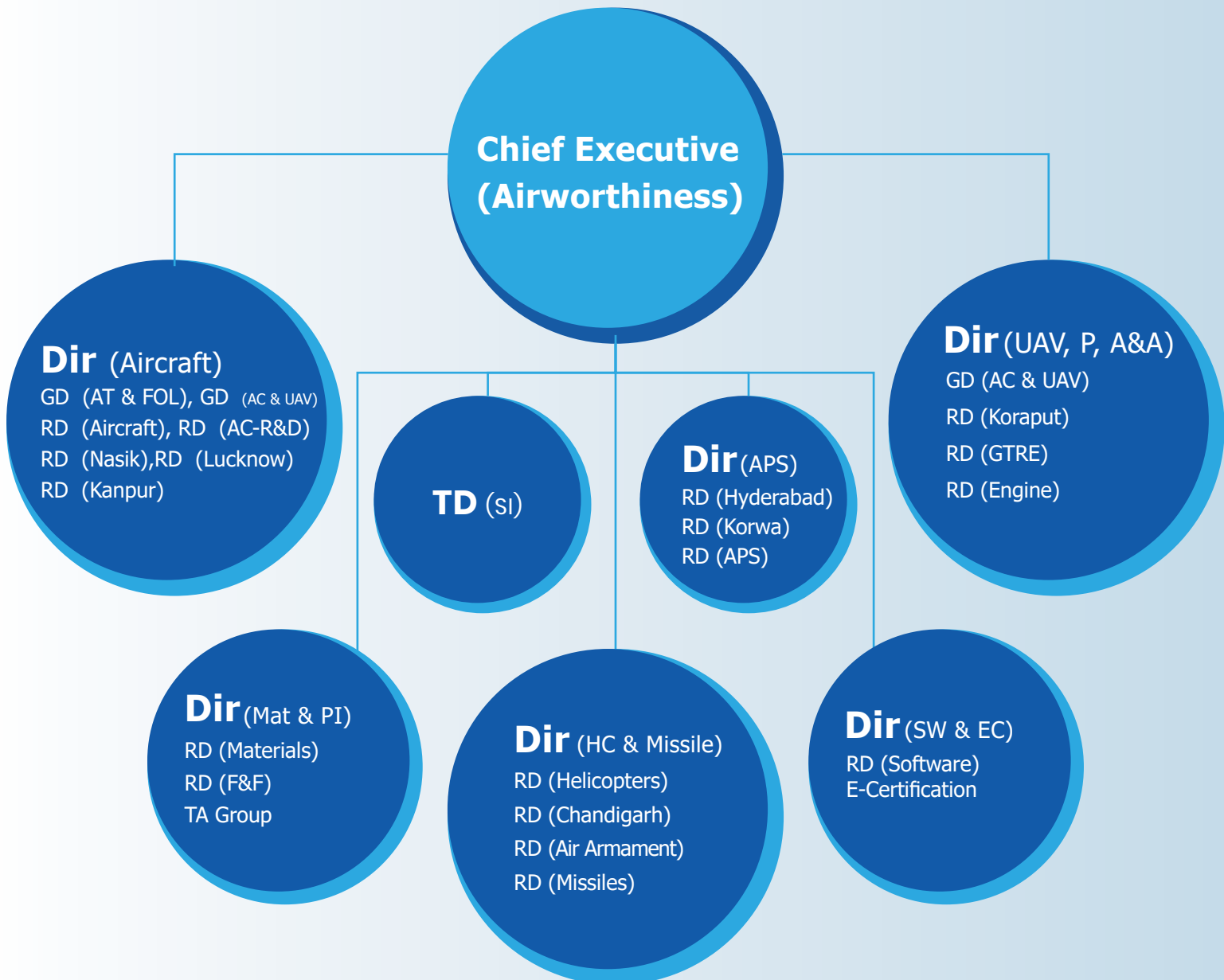
CENTRE FOR MILITARY AIRWORTHINESS & CERTIFICATION (CEMILAC), established in 1958, functions from Bangalore, the citadel of aerospace activities in India. Airworthiness functions related to military aircraft and airborne systems, hitherto discharged by Directorate of Aeronautics, are now totally dealt by CEMILAC. The erstwhile Resident Technical Offices, located at various divisions of HAL, R & D establishments and Base Repair Depots (BRDs), are now renamed and designated as Regional Centres for Military Airworthiness (RCMA). These Regional Centres are brought under the umbrella of CEMILAC, for speedy and more effective airworthiness functions. There are eighteen RCMA's spread all over the Country to ensure airworthiness during design, manufacture and overhaul of aircraft, helicopters, UAVs, Air launched missiles and their systems. CEMILAC is headed by the Chief Executive (Airworthiness), under the control of Secretary, Department of Defence R & D & Chairman, DRDO. The CE(A) has Directors, Group Directors and Regional Directors to assist him in the overall functioning and monitoring of the Airworthiness Assurance and Certification activities. Over the last one and a half decades there has been significant advancement in the Aerospace activities in India. Aviation materials, systems and complexities of missions have brought in greater challenges for airworthiness assurance functions in the country. Airworthiness assurance is fast emerging as an important discipline and need to account for frontier projects like Advanced Medium Combat Aircraft (AMCA), Light Combat Aircraft (LCA) Mk II, Twin Engine Deck Based Fighter (TEDBF), Advanced Light Helicopter (ALH), Kaveri Engine, Remotely Piloted Strike Aircraft (RPSA), Combat Air Teaming System (CATS)-Warrior, Advanced Air Launched Missile systems, Light Combat Helicopter (LCH), Light Utility Helicopters, Indian Multi Role Helicopter (IMRH), Rotary Unmanned Air Vehicle (RUAV) and SARAS Mk II etc.

CEMILAC

Quality Policy

To be centre of excellence for airworthiness certification of all airborne stores for military application achieved through effective implementation of quality management system and its continual improvement with the commitment of everyone in the organization

ORGANISATION STRUCTURE



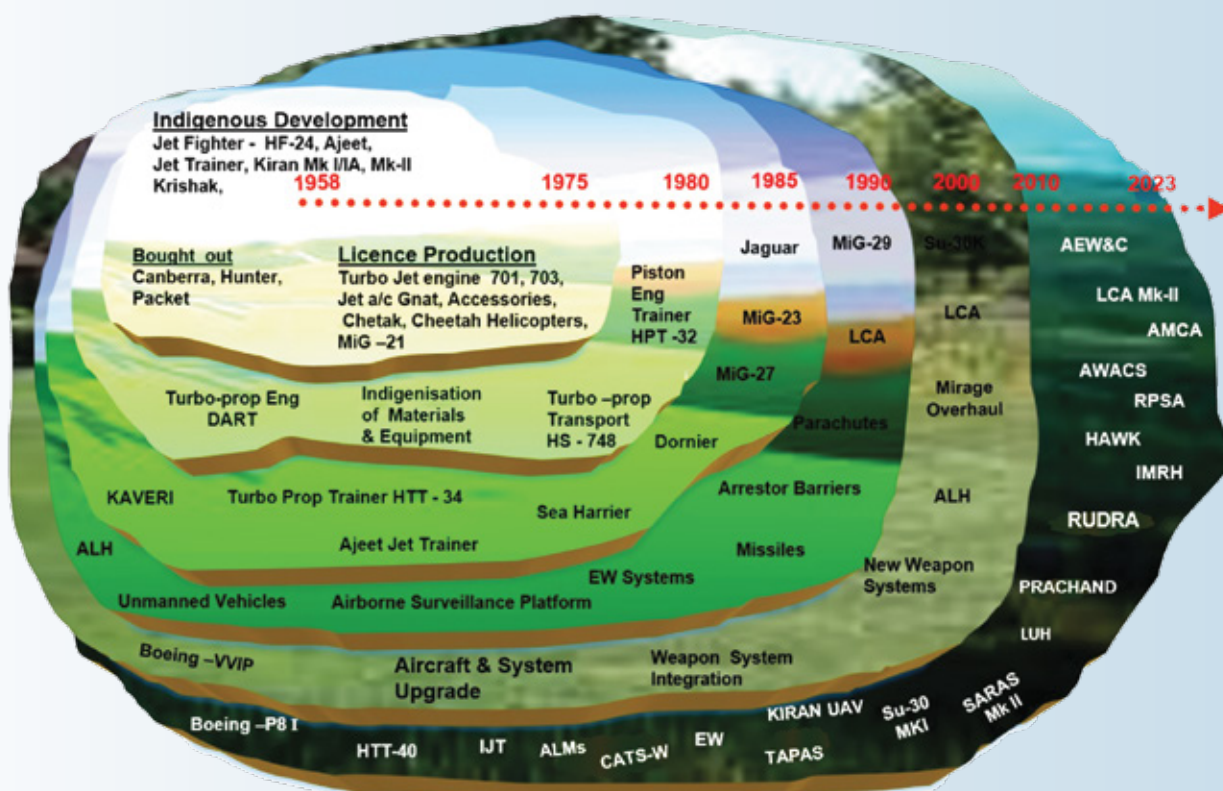
RCMAs all over India



CEMILAC Charter



The Expanding Horizon



Recent Achievements



Release of New DDPMAS Ver 1.0 by Honourable Raksha Mantri

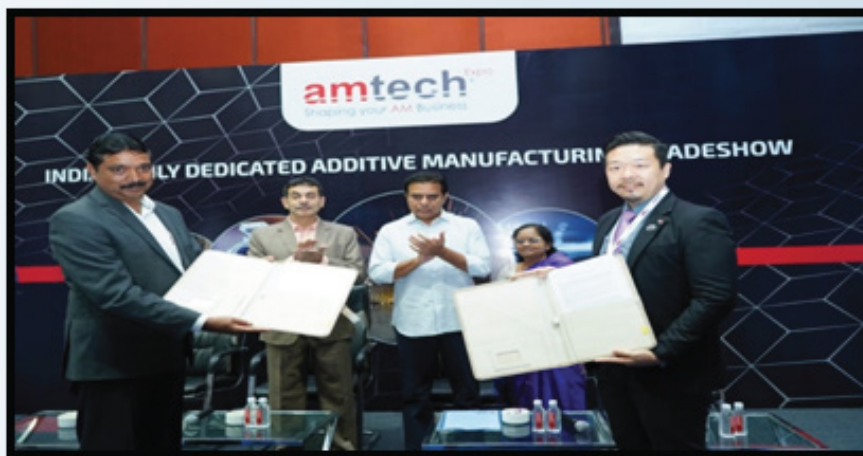


Initial Operational Clearance (IOC) to Light Utility Helicopter (LUH)



Design Organization Approvals (DOA) to M/s, RWR&DC, HAL Bengaluru and M/s ACCORD Software & Systems Pvt. Ltd., Bengaluru during DEFEXPO-2022.

Additive Manufacturing Certifications



MoU with ASTM for Metal Additive Manufacturing

Centre for Military Airworthiness and Certification, India has signed a MoU with ASTM International, USA in the field of Certification of Metal 3D printed Parts. The Memorandum of Understanding (MoU) is aimed at co-developing qualification framework that includes machine, raw material (powder, wire), 3D printed part and post processing qualification in the field of metal 3D printing



Clearance of Inner ring for Artouste engine produced through Additive Manufacturing



Clearance of Valve body for Dornier 228 Aircraft produced through Additive Manufacturing

Body is a component of Selector Valve manufactured through Additive manufacturing Technique using AlSi10Mg (Al-Si alloy). It is used for Extension and Retraction of the Main and Nose Landing Gear Actuators of the Dornier-228 Aircraft. Pre-Production Clearance was issued after the extensive qualification testing.

Operational Clearance for ALH MK-III for Indian Coast Guard



Provisional Clearance for Airworthiness of Hindustan Turbo Trainer -40 (HTT-40) Basic Trainer Aircraft



(ASR & FAR Compliance)

Industry and Academia Outreach Activities



Webinar on Airworthiness Certification & DDPMAS Ver 1.0



One Day Seminar, Industry Interaction and Panel Discussion on "Airworthiness Certification Procedures for Indigenous Development of Military Airborne Stores" held at Lucknow.



Seminar cum Industry Interaction on Airworthiness Certification of Indigenously Developed Military Airborne Stores at Hyderabad was organized



Industry Interaction on Airworthiness Certification Procedures for Indigenous Development of Military Airborne Stores was organized by Regional Centre for Military Airworthiness, RCMA (Nasik).



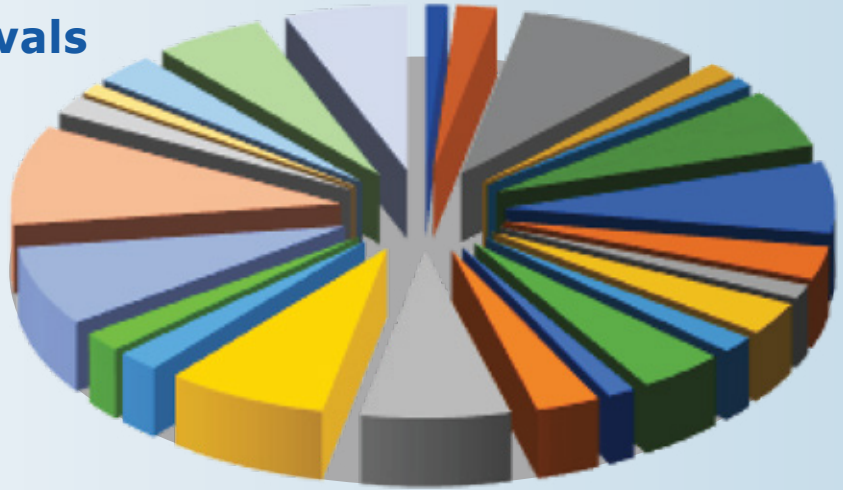
Seminar on Indigenisation & Certification of Aerospace Raw materials at Bangalore organized by Regional Centre for Military Airworthiness, RCMA(F&F).

Derby Missile integration & operational clearance on LCA AF Mk1 for Fleet Utilization



- ◆ Clearance to AESA RADAR for use on LCA AF Mk1.
- ◆ Clearance for Service Use has been accorded to 100-120 Kg PF Bomb, HSLD MK-II Bomb, ASTRA Mk-I, Article-A for use on Su-30 MKI aircraft.
- ◆ Type Approval accorded to indigenous Gas Turbine Starter Unit, GTSU-110-M2 as well as TOT for Productionization for LCA Mk-I (IAF).
- ◆ Type Approval Accorded for main and Nose Wheel Tyre of MiG-29K aircraft.
- ◆ Flight clearance to Helina/Dhruvastra missile system with launcher MK- II for dummy sorties with CFT missile and GFT with live missile on ALH MK IV (IA & IAF) at high altitudes for user evaluation.
- ◆ Developmental Flight Clearance issued to Naval Anti-Ship Missile – Short Range (NASM-SR) for carrying out Control & Guidance Flight trials on Seeking 42B Helicopters.
- ◆ The Type Approval extended by CEMILAC to 'Canopy Severance System' for LCA manufactured by M/s GOCL.

Total 2067 Type Approvals accorded



■ Air Pressure & Air Conditioning-23	■ Armament Store-41
■ Avionics Store-189	■ Batteries-31
■ Brake Pads-20	■ Communication Systems-118
■ Electrical Stores-145	■ Electrical Wires & Cables-67
■ Engine & Its Components -30	■ Fuel / Oil Systems-66
■ Hydraulic Systems-35	■ Instruments-89
■ Lamp & Accessories-28	■ Lubricants, Fuels & Greases-65
■ Mechanical Stores-151	■ Metallic Materials-164
■ Non-Metallic Materials-43	■ Paints, Varnish & Enamels-41
■ Rubber Compounds-162	■ Rubber Components -201
■ Resins, Glues & Adhessives-38	■ Parachutes & Arresters-23
■ Seat & Safety-61	■ Valves-112
■ Withdrawn -124	

New Initiatives – Atmanirbhar Bharat

- ◆ Setting up of Centres of Excellence for Software Certification, Safety, Reliability & Maintainability, CEH Certification, Certification of Aero Mechanical System.
- ◆ Setting up of CEMILAC Data Centre and E-certification Portal for fast tracking certification.
- ◆ Restructuring of Organisation to take up new challenges of airworthiness certification
 - ◆ Specialisation based RCMAs
 - ◆ Task Directive for Each Major Project
 - ◆ Directors at CEMILAC to be Single Point of Contact (SPOC)
- ◆ Systems Engineering based Certification Approach.
- ◆ Constitution of Cross Functional Teams to sustain supply chain and obsolescence management for the fleet of Indian Armed Forces.



CEMILAC

All Correspondence to be addressed to
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Defence Research & Development Organisation (DRDO)
 Govt. of India, Ministry of Defence
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DIRECTORATES (Dte) OF CEMILAC

Directorate (Helicopters & Missile) Tel: 080 2512 1200 Fax: 080 2523 4781	Directorate (Aircraft) Tel: 080 2512 1100 Fax: 080 2523 4368	Directorate (UAV & Propulsion) Tel: 080 2512 1300 Fax: 080 2523 4781	Directorate (UAV & Propulsion) Tel: 080 2512 1300 Fax: 080 2523 4781
Directorate (APS) Tel: 080 25121507 Fax: 080 25230355	Directorate (SW/E-C) Tel: 080 25121411 Fax: 080 25233673	Group Director (Aircraft) Tel: 080 25121050 Fax: 080 25234368	Group Director (AT & FOL) Tel: 080 25241488 Fax: 080 2524 0075

REGIONAL CENTRES (RCMAs) OF CEMILAC

RCMA (Helicopter) C/o HAL Helicopter Division Bengaluru – 560 017 Tel: 080 2523 1533 Fax: 080 2523 2139	RCMA (A/c) C/o Aircraft Division Vimanapura Post Bengaluru – 560 017 Tel: 080 2522 6375 Fax: 080 2523 3673	RCMA (Kanpur) C/o. HAL (TAD) Chakeri Aerodrome PO. Kanpur- 208 008 Tel: 0512 2453 693 Fax: 0512 2457 10
RCMA (GTRE) C/o GTRE, DRDO CV Raman Nagar Post Bengaluru – 560 093 Tel: 080 2519 4060 Fax: 080 2524 5572	RCMA (F&F) C/o HAL Helicopter Division RCMA (H/c) Building Bengaluru – 560 017 Tel: 080 22323936 Fax: 080 25236516	RCMA (Air Armament) Armament PO, Pashan Pune- 411 012 Tel: 020 2586 5006 Fax: 020 2586 5605
RCMA (A/c - R&D) Marathahalli Colony Post Bengaluru – 560 037 Tel: 080 2512 1151 Fax: 080 2523 3673	RCMA (Missiles) DRDL Campus Kanchanbagh PO, Hyderabad – 500 058 Tel: 040 2980 4057 Fax: 040 2434 1142	RCMA (Nasik) C/o HAL Nasik Ojhar Township, Nasik – 422 207 Tel: 02550 275159 Fax: 02550 275912
RCMA (Software) Marathahalli Colony Post Bengaluru – 560 037 Tel: 080 2512 1451 Fax: 080 2523 3673	RCMA (Materials) Kanchanbagh PO, Hyderabad – 500 058 Tel: 040 2434 0750 Fax: 040 2434 1827	RCMA (Korwa) C/o HAL Korwa Division Korwa, Amethi – 227 412 Tel: 05368 225156 Fax: 05368 255068
RCMA (Engines) C/o HAL Engine Division CV Raman Nagar Post Bengaluru – 560 093 Tel: 080 2524 2341 Fax: 080 2524 0075	RCMA (Hyderabad) C/o. HAL Hyderabad Division Hyderabad – 500 042 Tel: 040 2377 9301 Fax: 040 2377 9350	RCMA (Koraput) C/o HAL Koraput Division Post Box No. 15, Sunabeda – 763 002 Tel: 06853 221677 Fax: 06853220382
RCMA (APS) Marathahalli Colony Post Bengaluru – 560 037 Tel: 080 2512 1501 Fax: 080 2523 0355	RCMA (Lucknow) C/o HAL Lucknow Division Lucknow – 226 016 Tel: 0522 2351 206 Fax: 0522 2350 022	RCMA (Chandigarh) C/o 3 BRD Air Force, Chandigarh – 160 003 Tel: 0172 2637225 Fax: 0172 2637017

In Pursuit of Excellence in Flight Safety



CEMILAC

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