



Hindustan Aeronautics Limited



59TH | ANNUAL REPORT
2021-22



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Vision

To be a global leader in the Aerospace
& Defence Industry



Mission

We are committed to deliver superior technology solutions to the customers by leveraging our infrastructure and Design, Manufacture & Service skills, for achieving business excellence



Chairman's Statement



Dear Shareholders,

It is my privilege to extend a very warm welcome to you all for the 59th Annual General Meeting of your Company.

The past two years have been a period of intense action and reflection. We have seen a global pandemic, geopolitical tensions, supply chain disruptions and other public and private upheavals. As the situation improved, I believe we are standing at the threshold of a period of great opportunity and growth.

The financial year 2021-22 was challenging for each one of us. During the second and third wave of COVID, your Company had taken adequate preparatory measures and strict safety protocols was in place, due to which the business activities of the Company could continue as usual.

I take this opportunity to share the performance highlights during the year and future outlook for the Company.

Financial and Performance Highlights of the Year

In the financial year 2021-22, your Company recorded the highest ever turnover of Rs. 24,36,166 Lakh, experiencing strong growth of 8% from the previous year's Rs. 22,50,096 Lakh. The Profit Before Tax (PBT) saw a growth of 22% from Rs. 4,27,738 Lakh to Rs. 5,23,115 Lakh while the Profit After Tax (PAT) increased by 57% from Rs. 3,23,945 Lakh to

Rs. 5,08,650 Lakh. Our Order Book position stood at a healthy Rs. 82,15,400 Lakh as on 31st March, 2022.

The Company has paid 1st & 2nd interim Dividend of Rs.14 per share and Rs. 26 per share respectively of Rs.10 each for the Financial Year 2021-22, totalling to Rs.1,33,755 Lakhs. Further, the Board of Directors of the Company has recommended a final dividend of Rs. 10 per share of Rs.10 each for approval of shareholders. On approval of the Final Dividend by the shareholders, total cash outflow for payment of dividend would be Rs. 167,194 Lakh.

During the year, the Company has produced 34 numbers of new Aircraft and Helicopters, covering LCA Tejas, Dornier Do-228, ALH Dhruv and Light Combat Helicopter (LCH) in addition to the production of 80 New Engines and Accessories, at its various Divisions. The Company has also overhauled 207 Aircraft / Helicopters and 506 engines during the year.

Your Company is deeply dedicated towards manufacturing of indigenous aircraft and helicopter under Atmanirbhar Bharat and to achieve greater milestones in coming years. In fact, out of the 34 new platforms manufactured during the year, 30 are of indigenously designed and developed. As a continuous pursuit towards greater self-reliance, imported LRUs, systems, components etc fitted on indigenous platforms are being taken up for indigenization under various routes through in-house as well as private industry involvement under Make I, Make II etc. In FY 2021-22, a total of 1412 items have been indigenized.



Significant Achievements

Your Company has witnessed several significant achievements during the year, some of which are highlighted as under:

- In a major boost to Atmanirbhar Bharat Mission, HAL has bagged a contract for production and supply of 15 Light Combat Helicopters (LCH) on 30th March, 2022.
- The green field helicopter factory of HAL at Tumakuru is in place, with stage 1 & stage 2 infrastructure facilities at an investment of Rs. 47,637 Lakh by the company, to take up manufacture of Light Utility Helicopters (LUH) and other future platforms with an initial capacity of 30 helicopters per annum.
- The Company has completed the investment of Rs. 1,20,000 Lakh as part of UP Defence Industrial Corridor (UPDIC) towards enhancement of capacity & capability at Lucknow, Korwa and Kanpur Divisions of HAL and Naini Aerospace Limited, a wholly owned subsidiary of HAL.
- The Hindustan-228 aircraft, a civil version of Do-228 had its first flight on 26th December, 2021 and attained Type Certification from DGCA on 19th May, 2022. It is the first project Type Certified by DGCA in civil commuter role.
- As a major step towards civil operations, HAL signed a lease agreement with Alliance Air Aviation Limited on 26th September, 2021 for the supply of two Civil Do-228 aircraft for regional operations in Arunachal Pradesh, aimed at giving boost to India's Regional Connectivity Scheme (RCS). Commercial operations commenced with the first flight on the Dibrugarh-Pasighat route on 12th April, 2022.
- In-line with Government's vision to boost defence exports to friendly foreign countries, HAL has signed contracts with Government of Mauritius (GoM) for supply of one Passenger Variant Do-228 (PVD) on 10th September, 2021 and for one Advanced Light Helicopter (ALH) Mk III helicopter on 19th January, 2022. Further, HAL also completed the production and delivered this Do-228 PVD to Mauritius on 6th April, 2022 within a record time of six months from contract conclusion.
- The heaviest Semi-Cryogenic propellant tank ever fabricated by HAL was delivered to Indian Space Research Organization (ISRO) on 5th October, 2021.
- The 83 LCA MK1A program attained a major milestone with the first flight of the prototype held on 20th May, 2022.
- HAL delivered the first set of hardware for Gaganyaan mission (first unmanned mission) as well as the 150th HAL made Satellite Bus-structure to Indian Space Research Organization (ISRO) on 4th April, 2022.

New Initiatives

During the year, your Company has taken many new initiatives. Some of the major initiatives are as under:

- HAL has launched new platform design and development programmes such as Combat Air Teaming System (CATS) Warrior, Hindustan Lead in Fighter Trainer HLFT-42, High Altitude Pseudo Satellite (HAPS), Utility Helicopter-Maritime, Deck Based Multi Role Helicopter (DBMRH).
- HAL has signed an MoU with Rolls-Royce on April 9, 2021 to explore the potential opportunity of HAL to become a "Build to Print" supplier for the MT30 (Gas Turbine) package for sales within the Indian market.
- HAL has signed an agreement with Rolls-Royce on September 14, 2021 for Make-in-India Adour engine parts to support Rolls-Royce's international defence customer base.
- HAL and ZeroAvia entered into a development collaboration agreement on 9th November, 2021 for hydrogen-electric powertrain capable of flying the 19 seat Dornier 228 aircraft up to 500 NM.
- HAL has signed an MoU with Max AeroSpace & Aviation Pvt. Ltd, Mumbai on 12th January, 2022 to explore business opportunities for MRO of civil aircraft. Both HAL and Max AeroSpace will focus on exploring the business for components and engine / Auxiliary Power Units (APUs), which is currently going outside India for maintenance.
- HAL has signed an MoU with Uganda Peoples Defence Forces (UPDF) on 3rd March, 2022 towards Co-operation for Repair, Overhaul and maintenance, supply of spares etc for Su-30 Mk2 of UPDF.
- HAL has signed an MoU with Safran Helicopter Engines (SafranHE) on 14th March, 2022 for exploring business opportunities in the area of Helicopter Engines, consistent with the goals of the Government of India's "Atmanirbhar Bharat" /Make in India initiative.
- HAL has entered into a MoU with Israel Aerospace Industries (IAI) on 4th April, 2022 to convert Civil (Passenger) aircraft to Multi Mission Tanker Transport (MMTT) aircraft in India. Under the pact, HAL will convert pre-owned Civil (Passenger) aircraft into air refueling aircraft, cargo and transport capabilities.
- Your Company had appointed M/s Boston Consulting Group (BCG) for providing strategic advisory services for devising a business cum long term growth plan. The Consulting firm carried out the study and submitted a draft report which is under review.

Future Outlook

- Aerospace and Defence industry is passing through an exciting time in which companies are focusing on



technology advancements and operational efficiencies. It is expected that advancements in UAVs, Aero-engines and EHPA (Electric and Hybrid Propulsion Aircraft) technologies are going to set the future path for the industry, whereas Industry-4.0, Additive Manufacturing, Digitalization, Artificial Intelligence, Augmented and Virtual Reality tools are going to be efficiency drivers.

- Contributing to the “Atmanirbhar Bharat” mission, HAL has been consistently involved in developing an aerospace ecosystem for achieving self-reliance in Defence. The Company is also playing a role in capability development in the country and promoting employment generation in Aerospace & Defense Sector by handholding the vendors and suppliers.
- While the Indian Defence market will continue to be a prime revenue source for HAL due to projects like LCA Mk1A, LCH, LUH and HTT-40, we are preparing ourselves to have differentiated products and services, required in the future, by making our systems more agile, effective and cost efficient. The futuristic projects such as LCA MkII, Twin Engine Deck Based Fighter (TEDBF), Advance Medium Combat Aircraft (AMCA), Indian Multirole Helicopter (IMRH), Aero Engines etc., will ensure the technological lead of HAL in the years to come.
- To boost the growth of the Company, HAL is focusing on the International Market, Civil Aviation, Civil MRO, UAVs and other diversified business opportunities through indigenous efforts and business collaborations with Indian Private Industry/global OEMs.

Research and Development (R&D)

Your Company has continued its efforts towards the Design and Development of new platforms/ products / technologies and activities to enhance its capability with a view to bring technological superiority to its products and to cope up with the future technological challenges. These efforts have resulted in major achievements such as successful demonstration of deck based operations capability and integration of Medical Intensive Care Unit (MICU) etc on ALH MkIII, the capability of IJT to carry out six turn spins, completion of the erect spin certification flight trials on HTT-40, successful integration of lithium-ion main battery following flight trial on HTT-40, use of lithium-ion battery for military aviation is first in the continent. Towards the progress of various R&D efforts, the company has incurred a total expenditure of Rs. 1967 Crore in the year 2021-22, which is 8% of the turnover as against 7.50% of turnover in the previous year.

Corporate Governance

Your Company always strives to attain the highest standard of Corporate Governance practice. The Company has complied with the Guidelines on Corporate Governance framed by

the Department of Public Enterprises (DPE) and SEBI Listing Regulations except for the appointment of the requisite number of Independent Directors. The Company has established Systems and Procedures to ensure that its Board of Directors is well informed about the Policies of the Company, to enable them to discharge their responsibilities and to enhance the overall value of all stakeholders. We are constantly reviewing the Policies and Procedures of the Company and updating them to ensure transparency in all aspects of the Company's working.

Corporate Social Responsibility and Sustainability Development

As always, your Company is committed to social responsibility. We have undertaken various programmes and projects, towards integrating our social and business goals in a sustainable manner in line with schedule VII of the Companies Act, 2013. An amount of Rs 7,827 Lakh has been spent under CSR in the Financial Year 2021-22 and Rs. 300 Lakh has been deposited in the Unspent CSR Account against the CSR budget/ obligation of Rs.8,100 Lakh.

Acknowledgement


Your Company will continue to pursue global standards, and I am confident that the Company will achieve many milestones. We hope to attain all round success with the continued support and guidance of all our stakeholders.

I take this opportunity to extend my sincere gratitude to the Department of Defence Production, Defence Acquisition Council, Defence Finance, Department of Civil Aviation and our valuable customers viz., the Indian Air Force, Army, Navy, Coast Guard, Border Security Force, ISRO and other Global Aviation Companies.

I also thank DGAQA, CEMILAC, Principal Controller of Defence Accounts, Principal Director of Commercial Audit, C&AG, Auditors, Bankers, Legal Advisors, Collaborators, Suppliers, Shareholders and other Agencies and acknowledge their contributions in our achievements.

I am grateful to my colleagues on the Board for their valuable guidance and acknowledge the immense contribution and dedication of the employees of the Company at all levels.

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Place : Bengaluru
Date : July 15, 2022

R. Madhavan
Chairman and Managing Director



Corporate Information

BOARD OF DIRECTORS (As on June 28, 2022)

Shri R Madhavan

Chairman & Managing Director (CMD)

Shri Arup Chatterjee

Director (Engineering and R&D)

Shri C B Ananthakrishnan

Director (Finance) & CFO

Shri Alok Verma

Director (Human Resources)

Shri Jayadeva E P

Director (Operations)

Shri Chandraker Bharti

Joint Secretary (Aerospace)

Ministry of Defence

Govt. Nominee Director

Dr. Tessy Thomas

Director General (Aeronautical System)

Aeronautics Development Establishment (ADE)

Govt Nominee Director

Dr Divya Gupta

Independent Director

Shri Deepak Abasaheb Shinde

Independent Director

COMPANY SECRETARY

Shri G. V. Sesha Reddy

Executive Director

(Company Secretary)



Bankers

State Bank of India
Punjab National Bank
Indian Bank
Indian Overseas Bank
Bank of Baroda
Syndicate Bank
Union Bank of India

Statutory Auditor

M/s. Maharaj NR Suresh and Co.,LLP
Chartered Accountants, Bengaluru

Branch Auditors

M/s. S Srivastava & Co.,
Chartered Accountants, Luknow

M/s. C V K & Associates
Chartered Accountants, Mumbai

M/s. K. Prahlada Rao & Co.,
Chartered Accountants, Hyderabad

M/s. D N Dokania & Associates
Chartered Accountants, Bengaluru

M/s. Rajesh K Jhunjhunwala & Co.,
Chartered Accountants, Cuttack

M/s. Abhijit Dutt & Associates
Chartered Accountants, Kolkata

M/s. P. L. Tandon & Co.,
Chartered Accountants, Kanpur

M/s. Ganesan and Company
Chartered Accountants, Bengaluru

M/s. R Bupathy & Co.,
Chartered Accountants, Bengaluru

M/s. Sekharan Associates
Chartered Accountants, Bengaluru

M/s. A. Sachdev & Co.,
Chartered Accountants, Luknow

M/s. Suresh & Co.,
Chartered Accountants, Bengaluru

M/s. S S B & Associates
Chartered Accountants, Bengaluru

M/s. B.N. Subramanya & Co.,
Chartered Accountants, Bengaluru

M/s. P.K. Rungta & Co.,
Chartered Accountants, Bengaluru

Ms. P.V. Menon & Associates
Chartered Accountants, Bengaluru

M/s. Badari Madhusudhan & Srinivasan,
Chartered Accountants, Bengaluru

M/s. A P Kunjithaya & Co.,
Chartered Accountants, Bengaluru

Cost Auditor

M/s. GNV & Associates,
Cost & Management Accountants, Bengaluru

Legal Advisor

M/s. Sundaraswamy & Ramdas,
Advocates, Bengaluru

Tax Consultants

M/s. PricewaterhouseCoopers Private Limited,
Bengaluru

M/s. BSR & Co. LLP,
Chartered Accountants, Bengaluru

Credit Rating Agencies

M/s. ICRA Limited

M/s. CARE Ratings Limited





Board of Directors (as on June 28, 2022)



Shri R. Madhavan
Chairman and Managing Director

Shri R. Madhavan was appointed as Chairman and Managing Director (CMD) of the Hindustan Aeronautics Limited (HAL) with effect from September 1, 2018. He is a graduate in Mechanical Engineering from NIT, Raipur and also holds post graduate degree of M. Tech from IIT Madras. He joined HAL as a Management Trainee (Technical) in July, 1982 and has been associated with the company around 40 years.

Prior to his elevation as CMD of HAL, Shri Madhavan held the position of Executive Director, Accessories Division at Lucknow. He spearheaded successful absorption of technology for production of Su-30 Airframe & Engine accessories from raw material phase. During his tenure, the division was awarded the best performing Division (Customer Services) award in company-wide competition during January 2016.

With his rich and varied experience, Shri Madhavan has provided solutions related to intricate technical problems and strategic issues. He has given valuable inputs as a member of Tri-service committee for high altitude operation of Helicopters and had overseen successful launch of export of Engine sets to USA while in Engine Division, Bangalore, which led to considerable improvement in the Division's process to meet the international standards.

He had also extensively contributed to GOI's "Make in India" strategy by developing MSME sector vendors for Aerospace Manufacturing and had set roadmap for enhancing self-reliance & self-sufficiency through indigenization efforts for obsolescence management and for developing alternate technology leading to product improvement & reduction in cost. Under Shri Madhavan's leadership, HAL has earmarked Indigenization as "Key Thrust Area" and over a period has refined its internal machinery and policy for indigenisation of components, accessories and systems required for manufacturing as well as repair & overhaul of aircraft, engine and equipment.

Shri Madhavan in the capacity of Chairman of Aerospace & Aviation Sector Skill Council is contributing immensely to meet the challenge of skill development. As part of Government of India's ambitious programme to encourage innovation, Shri Madhavan is appointed as one of the Director of Defence Innovation Organisation (DIO) which is doing pioneering work in providing impetus to technology start-ups in the country in Aerospace and Aviation sector.

Shri Madhavan had also taken several e-initiatives, implementation of which have brought in systemic changes, transparency & process improvements. Under his leadership, HAL is embarking upon a major e-initiative called "Project Parivartan" in a journey to revive company's ERP system to increase operational efficiencies.

An avid reader and active in professional societies, Shri. Madhavan is a member of Aeronautical Society of India. He is also a member of Governing Council of CMTI and CSIR-NAL.



Shri Arup Chatterjee

Director (Engineering and R&D)

Shri Arup Chatterjee is a B.Tech in Mechanical Engineering from Jadavpur University and has done M. Tech in Aircraft Production Engineering from IIT, Chennai. He has also done MBA from IGNOU.

Shri Chatterjee joined HAL as 17th Batch Management Trainee in the year 1982. He had held several key positions in the Company prior to his appointment as Director (Engg. and R&D) w.e.f June 1, 2018.

Shri Arup Chatterjee has around 40 years of wide experience in Aerospace Industry. During his career span, Shri Chatterjee has served in various Divisions of HAL. He was the head of various departments in the field of Avionics Equipment required for Russian & Western origin Aircraft platform, in Korwa Division, where he has served for 28 years. He has also served in Kanpur Division for 4 years in the field of Air Frame Manufacturing, for Dornier, Avro & UAV Projects.

Further, he had served in Koraput Division of HAL, where he had immensely contributed in various programmes / projects viz., Repair & Overhaul of R25, R29B & R33 engines for MiG series fighter aircraft as well as Manufacture & repair/overhaul of AL31FP engines for Su-30 aircraft. Prior to his elevation to the post of Director (Engg. and R&D), he was the General Manager of Aircraft Research & Design Centre.

He had successfully steered Completion of IOC for LCH (Army), Completion of IOC for LUH (IAF & Army), Completion of 6 turn spin on HTT-40, FOC for Jaguar DARIN III Upgrade, Operational Clearance for ALH Mk III for Indian Coast Guard and Indian Navy and Reinitiating IJT project for spin trials.

Many new projects have been taken up under his leadership which have futuristic potential. Some of them are Tailboom folding & 2-segmented blade folding on ALH, IMRH, 200kg RUAV, LUH Civil, CATS, LCA Mk-IA, Avro Upgrade and major LRUs development for outlying divisions.



Shri C B Ananthakrishnan

Director (Finance) & CFO

Shri C B Ananthakrishnan was appointed as Director (Finance) & CFO of the Company with effect from August 1, 2018. He is a Commerce Graduate and Post Graduate in Business Administration from Madras University and is a fellow member of Institute of Cost Accountants of India. He has also received management and leadership training from Indian Institute of Management, Ahmedabad and *Institut Aeronautique et Spatiale* (IAS) Toulouse, France.

Prior to his appointment as Director (Finance), he was holding the post of Executive Director (Finance) in Corporate Office of the Company and handling overall Financial Planning and strategy, treasury management and taxation.

He joined HAL in 2004 and has over 35 years of work experience in both public and private sectors with stints in merchant banking, pharmaceuticals, fertilizers and Aerospace Industries. During his stints in Helicopter Division as Head of the Finance, he was instrumental in developing financial strategies and policies for pricing, cost control and profit planning for achieving overall goals of the Company and also secured one of the largest Helicopter Contracts for the Company valuing in excess of ₹ 14000 Crore. He was instrumental for Conclusion of prices for Repair & Overhaul and Supply of Spares by 3rd Pricing Policy Review Committee (PPRC), Conclusion of 73 ALH Contracts for Army and IN & ICG and Implementation of Ind AS etc.

He has played a pivotal role during Initial Public Offering (IPO) and listing of the Company shares during March 2018. He was instrumental in securing orders of 83 LCA MK IA and 15 LCH.