

Bharat Electronics Limited

Empowering the Nation's Defence Forces

Performance Highlights of 2016-17

FINANCIAL HIGHLIGHTS

Parameter	2015-16 (Audited)	2016-17 (Audited)
Turnover (Rs.Cr)	7541	8825
Profit Before Tax (Rs.Cr)	1732	2029
Profit After Tax (Rs.Cr)	1307	1548
Export (US \$ Million)	85	65
Turnover Per Employee (Rs.Lakh)	76.58	90.83
Value added per employee (Rs.Lakh)	33.35	39.52
Order Book Value (Rs.Cr)	32022 (as on 1.4.2016)	40242 (as on 1.4.2017)
Expenditure on R&D (Rs.Cr)	704	777

HIGHLIGHTS OF 2016-17

- Registered a turnover growth of 17% over previous year
- Export turnover of 65 Million USD
- Induction of Weapon Locating Radar to Army
- Supply commenced for major projects:
 - Integrated Air Command and Control System
 - Hand Held Thermal Imager with Laser Range Finder
 - Electronic Fuze
 - Low Level Transportable Radar
 - Ship Borne Electronic Warfare System (Varuna)
- Excellent "MoU" Rating for 2015-16
- Turnover from indigenous technology is 87%
- Sales from Defence business is 88%

MAJOR ORDERS EXECUTED

Some of the significant orders executed during the year include supply of the following products / systems:

- Akash Weapon System
- Fire Control System

Empowering the Nation's Defence Forces

- L70 Gun Upgrade
- Integrated Air Command & Control System
- Low Level Transportable Radar
- 3D Tactical Control Radar
- HHTI with LRF
- Radio Relay Frequency (LB)

NEW PRODUCTS

Some of the new products / systems introduced during the year are:

- Weapon Locating Radar
- Voter Verifiable Paper Audit Trail Mk 2
- Beacon Mk III
- Missile Two Way Data Link
- Gigabit Ethernet Based Ship Data Network
- Advanced Composite Communication System
- Ship Based EW System (Varuna)
- Battle Field Surveillance System - XR
- Hull Mounted Sonar (New Generation)
- Submarine Sonar Suite (USHUS 2)

MAJOR ORDERS RECEIVED

During the year 2016-17, the Company received many orders. Significant among these orders include:

- Long Range Surface to Air Missile with MFSTAR
- Advanced Composite Communication System for P17
- Electronic Voting Machine
- L-Band Static Tropo Upgrade
- Electronic Warfare Suite (Shakti & Nayan)
- Giga Bit Ethernet based Ship Data Network for P17
- Hand Held Thermal Imager
- Low Intensity Conflict EW System
- Home Land Security
- ALG Communication

EXPORT PERFORMANCE

- Achieved Export sales of US \$ 65 Million
- Major products include Coastal Surveillance System, CoMPASS, VHF Radio Bharti, Advanced Composite Communication System, Ship Borne EW System (Sanket), Electro Optic Fire Control System, Electro Mechanical parts etc.
- Participated in 3 International Exhibitions to showcase products & capabilities
- Export order book of US \$ 82 Million as on April 1, 2017; includes Offset order book of US \$ 15 Million
- Excellence in Exports under the category "Electronics & Communication (excluding IT / BT) - Medium and Large" from the Government of Karnataka during last 6 consecutive years

Empowering the Nation's Defence Forces

BUSINESS INITIATIVES

- New Advanced Night Vision Products Factory at Nimmaluru to expand the Night Vision Devices Business
- Strategic alliances with Defence labs, OFB and global OEMs for emerging businesses
- Dedicated Business Groups to address Homeland Security and Smart City Business
- Thrust on exports and offsets. Focus is on Build to Print, Build to Spec and Buyer Nominated Equipment
- Plans to diversify / expand business in both Defence and non-Defence sectors

R&D INITIATIVES

- 3-year R&D Plan for 2017-20 released with enhanced focus on collaborative R&D
- 20 patent applications were filed and one patent was received
- 91 technical papers published by R&D engineers in national and international journals
- Chief Technology Officers appointed in the areas of Communication, Electro Optics & Laser, Radar & Weapon System to focus on development of projects
- Knowledge Management Portal is upgraded and over 400 e-books are available across company as part of knowledge sharing
- Product Development and Innovation Centre (PDIC) Lab recognized by DSIR

MANUFACTURING INITIATIVES

- New Radar Assembly Hangar at Ghaziabad unit for Assembly, Testing and Integration of Radar & Antenna Systems
- "Blowing Sand & Dust Test Facility" at Bangalore for testing of Abrasion resistance of sub-systems mounted externally on aircraft
- Pulse Current Injection Test Facility (PCI) for High Altitude Electro Magnetic Pulse (HEMP) / Nuclear Electro Magnetic Pulse (NEMP) test of various system level projects at Bangalore Unit
- Electro Magnetic Compatibility (EMC) Chamber for system level testing facility at Bangalore
- The Low Pressure Chemical Vapor Deposition equipment of the IC Wafer Fabrication Facility upgraded to handle wafers from 4 to 6 inch diameter at Bangalore
- Automated Transmit / Receive Module Assembly Line consisting of die-attach & wire bonding lines to increase the X-Band TR Modules production capacity

QUALITY INITIATIVES

- All Units / SBUs certified for ISO 9001 QMS & ISO 14001-2004 EMS standards
- Seven Units / SBUs certified for AS 9100 Aerospace standard
- Central Software Development Group at Bengaluru Complex is CMMi level 5 certified and Central Research Laboratory at Ghaziabad is CMMi level 3 certified
- 'Quality Recognition Award' scheme introduced
- Six Sigma projects, Suggestion Scheme and Quality Control Circles to take BEL's Quality movement forward
- Total 191 engineers certified as CRE (Certified Reliability Engineers) and 141 engineers certified as CQE (Certified Quality Engineers) by American Society of Quality (ASQ)

Empowering the Nation's Defence Forces

- 75 PMPs (Project Management Professionals) were certified by Project Management Institute during 2016-17

MAKE IN INDIA INITIATIVES

- 88% of Sales Revenue from Indigenous technology
- BEL is focusing more on core areas and R&D, all non-core areas are being outsourced to Indian Industries including MSMEs
- Outsourcing and Vendor Development Policy has been released
- IDDM Clause incorporated in Procurement Manual in line with DPP
- "Make in India" Display Cells established in all Units of BEL
- Nodal officers for Outsourcing & Vendor development nominated
- Procurement from MSEs has been increased to 20%
- BEL's Test facilities are being provided to Private vendors

HR INITIATIVES

- Companywide per capita training man days was 5 during 2016-17 as against 4 in 2015-16
- Structured Executive Development programmes at premier institutes
- Change Management Program and Executive coaching for senior executives
- Programmes on Enterprise Risk Management, Outbound Learning, Strategy Building, Strategic Innovation and Competitive Intelligence
- Advanced Management Programme for General Managers
- Gender Sensitisation Programme (SAMMAN) & Women Leadership Workshop (DEEPSHIKHA)
- Launched Theater Based Workshops, Blended Learning Workshops and Dedicated Initiative for wellness through Yoga and Meditation Programs

ENVIRONMENTAL INITIATIVES

- All 9 Units of BEL are ISO 14001 and ISO 9001-2008 certified
- Bangalore Complex and Ghaziabad Units certified for OHSAS 18001: 2007
- Well-established Environmental Management System with pollution control measures, Waste Water Treatment, Zero Effluent Discharge, Rainwater Harvesting, Energy Conservation and proper disposal of Hazardous Waste
- With a total capacity of 13.9 MW wind energy plants, 238 Lakh units generated has been wheeled during 2016-17
- Green energy generated during 2016-17 is about 243 Lakh units
- Green Building concept has been introduced in all new buildings, and all future buildings will meet Green Rating for Integrated Habitat Assessment (GRIHA) rating compliance
- BEL has taken up sustainable development projects in the areas of Air Conditioning, Air Compressor, Lighting Management System, Natural Daylight Harvesting

Empowering the Nation's Defence Forces

CORPORATE SOCIAL RESPONSIBILITY

- BEL's Corporate Social Responsibility (CSR) Policy has laid down the following broad areas for providing benefit to the stakeholders: Health Care, Education, Rural Development, Environment Protection and Conservation of Resources. Some of BEL's CSR initiatives completed during 2016-17 were:
- Construction of public conveniences, bus-stops, footpaths, railings, medians, solar streetlights etc, in and around Bangalore Unit
- MoU signed by Bangalore Unit to facilitate upgradation of infrastructure & supply of essential tools, equipment and machinery to Government ITI, Gowribidanur, in Chikkaballapur district
- Construction of wards, mortuary room, toilets, renovation of existing OT and labour room, providing ACs, solar lights, furniture, DG set, ambulance and medical equipment at Primary Health Centre, Mahagaon Cross, Gulbarga
- Supply, Installation & Commissioning of 10 MLD Sewage Treatment Plant at Doddabommasandra Lake, Bengaluru
- MoU Signed with National Skill Development Corporation (NSDC) for the vocational skill development of 700 rural youth in Palasamudram (Ananthapur District) & Machilipatnam (Krishna District) in Andhra Pradesh
- MoU Signed by Ghaziabad Unit to facilitate creation of smart class, upgradation of infrastructure & supply of essential tools and machinery to Government ITI, Noida, Ghaziabad, UP
- Ghaziabad Unit has adopted Maharajpur village in Ghaziabad district, UP, for undertaking developmental work in the village, like construction of Government primary & middle school buildings, providing clean drinking water, sanitation & sewage facilities and organising awareness camps on health & hygiene
- MoU Signed by Navi Mumbai Unit to provide heavy equipment like lathe machines, welding machines & DG set to Government ITI, Panvel, in Raigad district, Maharashtra
- Civil surveying equipment being handed over by to the Principal of the adopted Government ITI, Panvel, in Raigad district, Maharashtra
- MoU signed by Pune Unit for skill enhancement of students by providing required tools & machines to Government ITI, Mulshi, in Pune district, Maharashtra
- Motorised sewing machines handed over by Pune Unit to the Principal of the adopted Government ITI, Mulshi, in Pune district, Maharashtra
- Construction of Government Senior Secondary School building, CC roads & panchayat platform, providing clean drinking water & sanitation facilities at Mandhana village in Panchkula district, Haryana, by Panchkula Unit
- MoU signed by Panchkula Unit to facilitate upgradation of infrastructure, capacity building of faculty & students & supply of essential tools and machinery to Government ITI, Raipur Rani, in Panchkula district
- Construction of Government Senior Secondary School building, installation of solar street lights, desilting of pond at Azhividaithangi village in Thiruvannamalai district, Tamil Nadu, by Chennai Unit
- MoU signed by Chennai Unit to facilitate upgradation of infrastructure & supply of essential tools and machinery to Government ITI, Guindy, in Chennai, Tamil Nadu
- Construction of water tank, yatri-shed, installation of solar street lights & awareness programmes on health & sanitation at Uday Rampur village in Kotdwara district, Uttarakhand, by Kotdwara Unit
- MoU signed by Kotdwara Unit to facilitate upgradation of infrastructure & supply of measuring instruments & accessories, essential tools and machinery to Government ITI, Kotdwara, Uttarakhand

Empowering the Nation's Defence Forces

- Construction of CC roads, overhead tank, water supply lines, borewells & pumps, water filtration system & installation of LED street lights at R N Agraharam village in Krishna district, Andhra Pradesh by Machilipatnam Unit
- Installation of Street Lighting & Surveillance System at IALA Industrial Estate by Hyderabad Unit
- Construction of borewells, storage tanks, water distribution pipelines and RO drinking water plant at Chowdammagutta Thanda village in Mehaboobnagar district, Telangana by Hyderabad Unit

AWARDS

- RM Award for Excellence in Performance, Export, Import Substitution & Design Effort
- Dun & Bradstreet Corporate Award 2016 in Electrical & Electronics category
- Dainik Bhaskar India Pride Award for the year 2016-17 in the 'Defence' category
- India Skill Award - 2016 in recognition of augmenting skill development process from the Ministry of Skill Development & Entrepreneurship
- 'PSE Excellence Awards 2015', in Operational Performance Excellence, R&D, Technology Development and Innovation, Corporate Governance and HR Management Excellence from the Indian Chamber of Commerce

OUTLOOK FOR THE FUTURE

- BEL to continue indigenisation efforts in line with 'Make in India' initiative
- Radars, Missile Systems, Communication & Network Centric Systems, Tank Electronics, Gun Upgrades, Electro-Optic Systems and Electronic Warfare & Avionics Systems to drive BEL's growth
- Capacity enhancement and creation of new test facilities for Defence business
- Company pursuing business opportunities in Solar Energy, Homeland Security, Smart Cities, Smart Cards and Telecom
- Strategies and action plans in place to face competition, maintain technological edge and retain leadership position in strategic electronics