



बी ई एम एल लिमिटेड  
**BEML LIMITED**

(CIN: L35202KA1964GOI001530)

(A Govt. of India Mini Ratna Company under Ministry of Defence)

Winner of



Golden Treadlock  
Innovation Management Award

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Ref: CS/SEs/21

16.07.2020

National Stock Exchange of India Ltd.  
Listing Compliance Department  
Exchange Plaza, Bandra-Kurla  
Complex, Bandra (East),  
MUMBAI - 400 051

The BSE Limited  
Listing Compliance Department  
P.J.Towers, 26<sup>th</sup> Floor,  
Dalal Street,  
MUMBAI - 400 001

Dear Sir / Madam,

Sub: **Press Release** under Regulation 30 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 - Reg.

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Please find enclosed press release under caption "**BEML at DEFEXPO 2020**" for your reference and records.

Thanking you.

Yours faithfully  
For BEML LIMITED

*S V Ravisekhar Rao*  
16/7/20

S V Ravisekhar Rao  
Company Secretary & Compliance officer



Encl: As above

## BEML AT DEFEXPO 2020

BEML's had a mega presence in the DEFEXPO Show, the biennial mega defence exhibition held in Lucknow, U.P. from 5<sup>th</sup> Feb to 9<sup>th</sup> Feb. 2020. BEML showcased its products at the indoor and outdoor pavilions.

India's Chief of the Army Staff Gen. M. M. Naravane PVSM, AVSM, SM, VSM, ADC inaugurated the BEML Stall in the presence of Dr. Deepak Kumar Hota, CMD, BEML and other senior officials of the company.

Dr. Hota briefed Gen. Narvane on BEML's ongoing projects related to Defence products.

Host of VVIPs visited BEML's stall including Shri Rajnath Singh, Hon'ble Defence Minister, Hon'ble Defence Minister of State, Gen. Bipin Rawat, Chief of Defence Staff, India, Shri. Mohammed Ahmed Al Bowardi, Minister of State for Defence Affairs of the UAE, Shri Jagdish Shettar, Hon'ble Minister of Heavy Industries, GoK, apart from high level defence team from Czech Republic, Bangladesh, Thailand and other countries.

The main focus at DEFEXPO 2020 was to display BEML's capability, promote Defence products, interact with probable customers to understand their requirements for supplying of specific products and to explore collaborations with foreign companies.

Moreover, it was also an opportunity to network with MSME and start-ups for maximizing localization / indigenization.

In line with theme of 'Digital Transformation', BEML unveiled an AI based Mobile Healthcare Diagnosis System to address the medical needs of the Armed forces and an 'Armoured Crew protected vehicle' like Medium Bullet Proof Vehicle (MBPV).

Further, BEML also exhibited its Mobile Standby Command Post Vehicle (MSCPV), Bulldozer with Hydrostatic Transmission drive technology (BD50HST) and 20T class heavy transportation vehicles in its outdoor stall.



Shri Jagdish Shettar, Hon'ble Minister of Heavy Industries, GoK at BEML stall



Gen. Bipin Rawat, Chief of Defence Staff India



UAE team visit at BEM Stall

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### New Products @ DEFEXPO 2020

#### New Dozer:

BEML introduced a new in-house designed & developed state-of-the-art Heli-portable Hydrostatic Drive Crawler Dozer with Advanced Power Angle Tilt feature. It has advanced Electric Monitoring System for accurate and smooth operation and adjustable Operator's seat for excellent comfort.



This dozer can be used mainly for clearing debris, making roads areas an exclusive use for Army applications in tough terrains. It can withstand extreme temperature variations from high temperature to minus temperatures.

Photo.

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### MOBILE STANDBY COMMAND POST VEHICLE (MSCPV)

BEML also launched this Armoured Troop Carrier which is a Bullet Proof Mobile command & control vehicle, on high mobility 4x2 chassis and carries up to 24 troops.

**Main Features:** Integrated with all security systems connected through wireless technology and is capable of functioning as a parallel and independent command & control centre. It is fitted with high-end camera with a 360 degree rotation.

Highly useful for urban and rural police operations including crowd control and riot prevention. It can act as a surveillance vehicle for borders & remote areas. Light weight steel composite hull on a robust 4x4 chassis includes 360 HP

engine with a maximum speed of 110 kmph with 60% grade ability with 25 degree side slope and high ground clearance enables it to travel through fields, over ditches and obstacles, as well as hilly and rocky terrain. It easily traverses mud, snow, gravel and sand while it speeds over dirt and paved roads. It is also equipped with a DG set with UPS as emergency backup for electronic subsystems.

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### **Medium Bullet Proof Vehicle 'Gaur'**



Medium Bullet Proof Vehicle is an advanced version of Medium Bullet Proof Vehicle (MBPV) MK-II, christened as 'Gaur' was showcased at the ongoing DEFEXPO 2020 at Lucknow.

Launching the vehicle Dr. Deepak Kumar Hota, CMD BEML said, "BEML MBVP- MARK II was designed and developed indigenously with added safety features, that also showcases our commitment towards realising the mission of 'Make In India'.

**MAIN FEATURES:** The vehicle is equipped with night vision camera, blast resistant seats, GPS navigation, radio and intercom system. The vehicle shields security personal from arm fire, hand grenade and carry up to 12 persons.

BEML MBPV MK-II is a 4x4 wheel RH drive, heavy duty all-weather off-road mobility vehicle and specially designed for easy manoeuvrability, operability and maintainability.

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### **AI Powered Medical Health Diagnostic Systems**

BEML's 'AI' Powered Medical Health Diagnostic System (MHDS) displayed at DEFEXPO 2020

#### **MAIN FEATURES:**

It has the following major features to cover medical diagnostic needs of troops in forward posts, especially in high altitude areas.

The station housed in a 20 feet container on a high mobility platform (BEML TATRA 8x8/6x6) with artificial intelligence (AI) powered diagnostic system for troops in field, who are away from expert medical advice and attention.



MHDS also consists of Artificial Intelligence based Chest X-Ray Diagnosis, Artificial Intelligence based diagnosis of Eye Analysis and Diabetic Retinopathy, Computer based diagnosis (CAD), Digital Radiology, Cardiograph, Pathology Laboratory, etc.

It provides for computer aided diagnosis using AI and also obtain expert consultation from higher echelon hospitals or from a cloud based tele consultation system. It can be remotely connected to a medical data base too. The unit is provided with a dust free clinical environment, air conditioning and generate back up.

“This is first of its kind in India and BEML is proud to be associated with Indian Army during the disasters. It shows the BEML’s capability in making indigenous products under Make in India initiative” said a proud Dr. D. K. Hota, CMD BEML.

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### 20 T Trailers



BEML has developed trailer, which is a ‘Medium Capacity Low Deck Full Trailer’, suitable for On road & Off road applications and used for transporting construction equipment, weighing upto a max of 20T capacity, for the Indian Army.

The trailers are provided with ABS system, has hinged type foldable mechanical ramps and loose ramps for loading/unloading operations.

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### Memorandum of Understandings (MoUs)

During DEFEXPO 2020, BEML entered into MoUs with several companies under ‘BANDHAN’ a joint initiative of the Ministry of Defence, Govt. of UP.

**Research & Development Establishment Engineers (R&D Engrs.), DRDO and BEML Ltd.** committed to a long-term partnership through a ‘License Agreement Transfer of Technology’ for indigenous development of new ‘Technology of Mine Field Marking Equipment Mk-II (MFME Mk-II)’. This product will be used by the Indian Army for marking the entire perimeter of

the mine area in remote locations and fence it through a semi-automatic system on a high mobility multi terrain platform.



Dr. Deepak Kumar Hota, CMD BEML receiving the Licence of Agreement for ToT from Dr. G Satheesh Reddy Chairman, DRDO in the presence of Shri Rajnath Singh, Hon'ble Minister of Defence, Shri Shripad Y. Naik, Hon'ble Minister of Defence State and Shri Yogi

Adityanath Hon'ble Chief Minister of U.P, Shri Ajay Kumar IAS Secy. Defence GOI and Shri M. Muralidhara, Director (Defence), BEML.

Accepting the Licence of Agreement for Transfer of Technology from DRDO Dr. Deepak Kumar Hota, CMD said, "With the signing of the MoUs, BEML is upbeat and would like to establish itself further towards building the nation's capability and create a footprint in UP as well. We are optimistic of the future that augurs well for the defence industries."

**With Pearson Engineering Ltd, UK:** For manufacturing, supply, integration, provide training, Spares & Services for 'Track Width Mine Plough' for T-90 Tanks. The commitment is to localise to the maximum extent. This demining equipment is time tested for different soil conditions of Indian desert and Customized to Indian operations

**With Bharat Forge Ltd, Pune:** For collaborative programmes viz. Development of Mounted Gun System on a 4x4 High mobility vehicle, critical armoured machined forgings for Recovery vehicles, Power train components for 1500 HP Engine and explore potential export markets for APCs.

**With Prognosys Medical Systems Pvt Ltd, Bangalore:** For jointly explore emerging opportunities in AI based Medical Health & Diagnostic Systems on High Mobility Platform for military applications. This product gives operational advantage to Indian Army in deploying at remote locations for faster diagnosis of wounded soldiers by a paramedical or Junior Doctors. The prescription / recommendation of treatment from Specialists are through AI based technology.

**With Texmaco Rail & Engineering Private Limited, Kolkata:** To jointly address development of systems / subsystems; manufacture; maintenance of existing systems of Russian OEMs in India for T series Tanks and also special rail wagons for Indian Railways.

**With Punj Corporation Pvt Ltd, New Delhi:** To jointly explore development of Russian components for T-72/T-90 tanks for up gradation and overhauling programs under the policy initiatives of the Government of India.

**With Si2 Microsystems Pvt Ltd, Bangalore:** To jointly explore business opportunities for technology requirements in Defence forces in electronic systems, sub systems, electronic fencing and surveillance systems.

### **BEML Metro Cars in operation at East West Line, Kolkata**

The first 5.7 km section of Kolkata's second metro line was formally inaugurated by Shri Piyush Goyal, Hon'ble Minister of Railways, on Feb 13 2020, at Kolkata. BEML has supplied a batch of 14 six car train sets each of which has a capacity of maximum 2068 passengers. Manufactured at BEML's Bangalore Complex the high end train sets with body shell made of stainless-steel. The light weight highly energy-efficient trains are monitored and selectively control by a micro- processor- based train control and management system (TCMS).

High level rail team from BEML, led by Dr. Deepak Kumar Hota, CMD was present at the inauguration function and other senior level officials.

Speaking on this occasion, Dr. Hota said, "BEML has responsible for most of the technological support and the nitty-gritty, like training the drivers in Communication Based Train Control System (CBTC)."



CMD BEML greeting Shri Piyush Goyal, Hon'ble Minter of Railways during the inauguration East West metro Line, Kolkata

### **Time to change and expand export basket base**

Department for Promotion of Industry and Internal Trade (DPIIT) and FICCI jointly organised a programme on '**Public Procurement for Make in India**' at New Delhi on 17<sup>th</sup> Feb 2020. Addressing the gathering Shri Piyush Goyal, Minister of Commerce and Railways who was the Chief Guest on this occasion said, "In order to promote the Make India programme, industry must adopt

international quality standard and scale up production to remain globally competitive.”

Dr. D.K. Hota, CMD BEML and also the Chairman of FICCI Public Procurement Committee also shared his perspective on public procurement for Make in India. We need to adopt latest technologies like AI and Machine learning in manufacturing sectors in order to become value added producers.

Shri Som Prakash, Ministry of State for Commerce & Industry, Gol and Dr. Guru Prasad Mahapatra, Secretary, DPIIT, Gol, were also present and shared their views.

### **BEML SUBURBAN TRAIN (MEMU) FOR INDIAN RAILWAYS**

BEML has dispatched today prototype of Mainline Electric Multiple unit (MEMU) to Indian Railways. The Main line electrical multiple unit (MEMU) with 3 phase onboard Propulsion system, is an existing Indian Railways approved Car body design that has been adopted, re-engineered and developed by BEML on a contract from Indian Railways.



The 3 phase Propulsion system is state-of-the-art system consisting of IGBT based microprocessor controlled 3 phase drive with VVVF (Variable Voltage Variable Frequency) control. The train has regenerative braking system for energy saving, and saves around 30% of energy thus reducing the carbon footprint. Energy saving LED lights are also used for illumination in the Coaches.

The train is equipped with. GPS based Public Address (PA) and Passenger Information system (PIS) with Cab to Cab communication. Fire retardant furnishing materials are provided in the Coaches for passenger safety. The train has provision for interfacing with Auxiliary Warning System (AWS) and Train Protection Warning System (TPWS). The prototype train consisting of 12 cars (3 Driving motor Coaches and 9 Trailer coaches) have been successfully inspected at factory by RDSO and cleared for Oscillation trials. The prototype train is dispatched today the 30th May 2020 to Northern Railway, Ghaziabad. BEML will be supplying 300 nos. of MEMU coaches to Indian Railways.

### **Ambedkar Jayanti**



At Mysore

BEML celebrated the birthday of Baba Saheb Dr. B.R. Ambedkar, one of the greatest icons of modern India, a great social reformer and an architect of the Indian Constitution, on 14<sup>th</sup> April.

At Mysore complex SC/ST welfare employee's association with management garlanded the statue of Dr. B.R. Ambedkar to mark the respect to great leader.

Shri D Narayana, President SC/ST welfare association, Shri A S Thamilselvam, GM and others were present.

## **AWARDS**

### **PRC Awards**

It is a matter of pride BEML bagged prestigious Public Relation Council of India Excellence Award 2020. BEML Dairy bagged gold award in the category of dairy, Silver for its CSR documentary dedicated to Mahatma Gandhi and Bronze award for its corporate film.



Public Relation Council is a premier network council that connects PR, Corp. Comm., Media, Advertising, HR Professionals, apart from Mass Communication academia. It facilitates continued exchange of knowledge among professionals.

### **CMD BEML Conferred PSU Leadership Award**



CMD, BEML was conferred Governance Now **7th PSU Leadership Award for BEML's 'Efforts & Achievements'**.

**Bangalore Complex Teams win 'Par Excellence' award in NCQC**

BEML's Bangalore Complex Teams won 'Par Excellence award in 33<sup>rd</sup> National Convention on Quality Concepts (NCQC) held at IIT BHU, Varanasi, recently.

Team 'MARVEL' led by Sri KYNV Prasad, Manager (Production) along with team members Shri Shivakumar, HST-Welder; Shri Chandrashekar, Technician-Welder; Shri Deepu S, Manager-Planning and Shri Anil Kumar K, Manager-Coach Delivery presented the case study on 'Optimization of MIG Brazing parameters for LHB Side wall manufacturing' based on Design of Experiments.

Team 'METRO' led by Shri M V N Raghavendra, Asst. Manager-Metro Carbody, along with team members Shri Jaya Kumar; Sr. Technician, Shri Ravishankar

Ronad, Technician; Shri Bibhuti Toppo, Asst. Manager-Metro Carbody and Shri Suresh Kumar S, Asst. Manager-Metro Car body presented the case study on 'Productivity Improvement and Minimization of Bulges (Protrusion Marks) on Roof in BMRCL Carbody Manufacturing'.

In this convention, 1645 Case Studies were presented on Quality Circles and Allied Concepts, from all over the country by 505 organizations. With this, both the teams qualified to participate in International Convention on Quality Control Circles (ICQCC) 2020 scheduled in December 2020 at Dhaka, Bangladesh.



Team MARVEL

Team METRO

### **Achievers**

1 Ms. Rekha N Parmar, Supervisor, Dist. Office Ahmedabad, has been awarded with Rs.5000/- cash and certificate by the Gujrat State Govt. for expertise in the category of in person disabilities (Ortho) in the Public Sector.

2 Shri D Sundar, Deputy Supervisor working in HT Shop, EM Division KGF Complex has been awarded the Degree of Social Works by International Peace University, Germany. He also participated and completed intense training - cum- seminar on the topic 'Establishing Global Peace' by IPU Achievers Forum and Global Accreditation Council, Stuttgart, Germany.

Being a regular Blood Donor, he has donated blood more than 100 times for the needy people and received the Life Saver award from KGF Complex, BEML SC/ST Association.

3 Shri S Ravengaiyan, participated in the 39<sup>th</sup> State Masters Athletic Championship in the category of 50+ conducted by Karnataka Masters Athletic Association and secured first place in long jump, bagged second places in hammer throw, long jump and 100 mts running race. He was honoured at Rajayotsava celebrations at KGF.

4 Smt. Chitra Prabha Vathi, wife of Shri Chachidanandan of Security Department, KGF Complex and Smt. SK Uma wife of Shri RS Venkatesh, Payrolls KGF Complex have been awarded Best Teacher award by the Karnataka State

Primary School Association, KGF in recognition of the service rendered in the field of education.

### **1<sup>st</sup> shell of the proto Train Set for MRS-1 Project rolls out from Bangalore Complex**

BEML celebrated the completion of the 1st body shell for the rolling stock of Mumbai Metro's (MMRDA). The function held at Bangalore on 20<sup>th</sup> Feb. 2020 was attended by Dr. Deepak Kumar Hota, CMD BEML, Dr. Sonia Sethi, IAS, Additional Metropolitan Commissioner, Shri SS Joshi, Director RS, DMRC, and other officials from the Delhi Metro Rail Corporation (DMRC) and Mumbai Metropolitan Region Development Authority (MMRDA).

BEML began manufacturing coaches in July 2019 and will supply a total of 504 lightweight, fully-furnished, modern metro coaches for MRS 1, MMRDA.

