Innovation in **MOTION**
Distinguished Customers

NATIONAL

Indian Railways
Govt. of India

Delhi Metro Rail Corporation Ltd.

Kolkata Metro Rail Corporation Ltd.

BEML Limited
Ministry of Defence, Govt. of India

Hindustan Aeronautics Ltd.
Ministry of Defence, Govt. of India

Defence Research and Development Organisation (DRDO)
Ministry of Defence, Govt. of India

Indian Air Force
Ministry of Defence, Govt. of India

Bharat Heavy Electricals Ltd
Govt. of India

Bharat Electronics Limited
Ministry of Defence, Govt. of India

INTERNATIONAL

Bombardier Transportation
Switzerland

Thales
France

Suomen Vaimennin Oy
Finland

Info-Tek Corporation
Taiwan

AH Industries
Israel

Barco
China

(Names are not in any particular order)
Corporate Overview

River Engineering Pvt Ltd is engaged in designing, manufacturing and supplying of top-of-the-line products in the technology arena of electrical, magnetic and electromechanical for Mainline Railways, Metro Rail, Aerospace and Defence applications.

An array of equipment that are manufactured by the company are for electric locomotives, Passenger Coaches AND high-end precision products for aerospace and defence, among others.

The company’s core competencies comprise technology, absorption, customisation, modification, design & development, testing, installation and project management.

The state-of-the-art manufacturing facility has been certified for quality management, health and safety, environment protection, military worthiness and quality assurance for aerospace and defence. The company has well in place an accomplished team of highly qualified and trained professionals.

The company has successfully acquired business unit of Tap Changer for electric locomotives from Bombardier Transportation and also industrial activity of magnetic parts of Barco, n.v., Belgium.

The company is led and mentoried by technocrat Dr A K Agarwal, who holds a doctorate in Electrical Engineering, Faculty of Technology, Delhi University. He has a tilt towards philanthropic activities and an active interest in penning books of varied hues.
Key Products

AEROSPACE & DEFENCE

* Hydraulic Distributor Assembly
* Fuel Distributor Assembly
* Reheating & Nozzle Control Assembly
* Stator Blade
* Nozzle & After Burner Assembly
* Connection Assembly
* Pump Assembly
* Main Wheel Assembly
* Stringer (Main Frame Assembly)

Magnetic parts for coils and transformers for projection industry and defence

Zoom Thermal Imager (20X & 16X) for Armoured Vehicle

Stator Blade for MiG aircraft

Holographic weapon sight for assault rifle

Ruggedized Connectors

Body for HAL'S Sukhoi

Body for Jaguar

Submarine Rugged Display Panels

* Critical items used
Key Products
RAILWAYS & METRO

- On-load Single Phase High Voltage Tap Changer for Electric Locomotive
- Pantograph
- Key Multiplier
- Connectors
- Failure Indication & Brake Application (FiBA)
- Operating Panels
- Earthing Switch
- Coach to Coach Coupler
- Gear Case
- Electric Panels
- Terminal Block
Design and Development

Innovative Design Capabilities
- Tool Design
- Product Design
- Building SPMs using
- Pneumatics/PLC

Design Output
- Tooling: Jigs, Fixtures
- Parts Detailing
- Assembly Drawings
- Generating & Maintaining Technical Documentation & Standards

Versatile Computer aided design & manufacturing support system
- Delcam Powermill (CADCAM Software)
- DNC Max
- Pro E Creo (3D Design Software)
- Solid Works (3D Design Software)
- AutoCAD (Design Software)
Quality Assurance

- Calibration facility with all the reference equipment calibrated from National accredited test labs with traceability to National and International standards.
- Fully computerized decision support and control system for all incoming materials using in-house developed software.
- Continuous vendor evaluation and assessment.
- Quality audits and pre-dispatch inspection.

The machine is designed for conducting torsion and twist test on various jumper coupler. Rotation measurement is done by proximity switch with digital display.
Versatile CNC machines and other specified mechanical equipment for milling, boring, drilling, contouring etc.

4-Axis Vertical Machining Centre
(X=425, Y=580, Z=510mm to X=1600, Y=800, Z=1000mm) Travel Resolution: 0.001mm (1 Micron)

Electro-mechanical Assembly Set-up

CNC Turning Centre
Capacity: Ø0.5 to Ø4.00 mm & Length: 0.1 to 500mm
Travel Resolution: 0.001mm (1 Micron)

CNC WIRE CUT & EDM CENTRE

Wire-cut Machine: X-400mm, Y-300mm, Z-250mm, Dia-UV22
CNC EDM Machining Centre: Table Size: 650mm x 400mm,
Dimension: X-400mm, Y-300mm, Z-350mm
3 Max Metal Removal Rate: 390mm /min

SWITCHGEAR
Manufacturing Facility
TAP CHANGER

Tap changer assembly area

Electro-mechanical Assembly Set-Up
Double Pole Bushing Production area
Tap Changer testing area

MAGNETICS

WELDING
State-of-the-art welding (TIG/MIG)
The silent flight of owls and, especially, the special adaptations of the owl wings and feathers that are held responsible for the low noise generation, serve as a motivation for engineers and researchers across the globe. A study, among others, to this effect was first conducted by a professor, Dr E Mascha, at a university in Prague, Czech Republic, in 1904. This phenomenon has also been put to test in a room equipped with multiple microphones. On the other hand, a WHO report in the year 2011 came to the conclusion that environmental noise from planes, trains and vehicles causes stress in a human body, which gradually takes a toll on its health.

Keeping both in mind, the company takes its cue from hushed flight of owls and strives to keep noise pollution on its industrial premises on a tight leash, thereby reducing stress levels in its workforce and enhancing its productivity, and at the same time top-of-the-line products manufactured by it also emit as much lower noise as possible. A lesson well-learnt from the animal kingdom.
Certification

- ISO-9001: Quality Management Standard from DNV-GL
- ISO/TS 22163: (IRIS-International Railway Industry Standard) for Railway application from DNV-GL
- AS-9100: Quality Management Standard for Aerospace, Defence & Space application from DNV-GL
- ISO-14001: Environmental Management System Standard from DNV-GL
- EN15085-2: For Welding of Railway Vehicle & Components from TÜV, Rheinland
- NADCAP: (National Aerospace and Defense Contractors Accreditation Program) for Welding of Transport & Power Generation from PRI, USA
- Research and Development Centre recognised by Ministry of Science & Technology, Govt. of India
- Approval for “Design, Development and Manufacturing of Aero-mechanical and Aero-Electromechanical Sub-systems and Accessories for Airborne Applications” by Centre for Military Airworthiness & Certification (CEMiLAC), DRDO, Govt. of India
- Approval for “Manufacturing and Supply of Mechanical Components, Mechanical and Electro-mechanical Assemblies” from Directorate General of Aeronautical Quality Assurance (DGAQA), Govt. of India
River Engineering Pvt Ltd

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