AEROSPACE & DEFENCE

RAILWAYS & METRO

Innovation in motion

www.riverengg.com
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 electro-mechanical 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 mentored by technocrat Dr A K Agarwal, who holds a doctorate in Electrical Engineering, Faculty of Technology, Delhi University. He has a positive tilt towards philanthropic activities and an active interest in penning books of varied hues.
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 Vaimenin Oy, Finland
- Info-Tek Corporation, Taiwan
- AH Industries, Israel
- Barco, China

STRATEGIC ALLIANCES
- AluTec GmbH, Germany
- KAA Assemblies Ltd, Israel
- GGT GMEINDER GETRIEBETECHNIK AG, Germany
- Barco NV, Belgium
- AW Solutions, Poland
- Suomen Vaimennin Oy, Finland
- HY-LOK Corporation, South Korea
- SAMWON FA, South Korea
To build an organisation that demonstrates visible synergy and evolves effective strategies, embodying respect to commitment made to our associates.

To set a benchmark in quality by achieving highest standards for designing and manufacturing products of desired specifications in order to cement a long-term relationship with our clients, through loyalty and trust.

To eliminate 'sudden surprise' by closely associating with clients from day one of the product development phase. Humanism is also an integral part of it.

Take our cue from silent flight of owl and keep noise pollution to bare minimum, a lesson well learned from the animal kingdom.
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.
Key Products

AEROSPACE & DEFENCE

- Stator Blade for MiG aircraft
- Submarine Rugged Display Panels
- Body for Jaguar
- Body for HAL's Sukhoi
- Magnetic parts, coils and transformers for projection industry and defence
- Zoom Thermal Imager (20X & 16X) for Armoured Vehicle

* Major components in the assemblies

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- Nozzle & After Burner Assembly
- Reheat & Nozzle Control Assembly
- Fuel Distributor Assembly
- Hydraulic Filter Assembly
- *Hydraulic Distributor Assembly
- Pump Assembly
- *Oxygen Regulator Assembly
- *Connection Assembly
- *Main Wheel Assembly
- *Stringer (Main Frame Assembly)
Key Products

RAILWAYS & METRO

- Pantograph
- Terminal Block
- On-load Single Phase High Voltage Tap Changer for Electric Locomotive
- Connectors
- Coach to Coach Coupler
- Gear Box Case
- Driver Desk Panel
- Dampers for Locomotives and Coaches
Design & Development

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

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)

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

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

TORSION TESTER
The machine is designed for conducting torsion and twist test on various jumper coupler. Rotation measurement is done by proximity switch with digital display.
Manufacturing Facility

MECHANICAL

Versatile CNC machines and other specified mechanical equipment for milling, boring, turning, drilling, contouring etc.

CNC TURNING CENTRE:
Capacity: Ø0.5 to Ø400 mm & Length: 0.1 to 500 mm  Travel Resolution: 0.001 mm (1 Micron)

ELECTRO-MECHANICAL ASSEMBLY SET-UP

SWITCHGEAR
Special fixtures (compression) for Jumper Couplers & torsion/ dynamic testing facilities

4-AXIS VERTICAL MACHINING CENTRE
(X=425, Y=580, Z=510 mm to X=1600, Y=800, Z=1000 mm) Travel Resolution: 0.001 mm (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,
Max Metal Removal Rate: 390 mm³/min
Manufacturing Facility

TAP CHANGER TESTING AREA

TAP CHANGER ASSEMBLY AREA

MAGNETICS
Automatic liner and toroidal winding machines

WELDING, State-of-the-art welding (TIG, MIG)

DOUBLE POLE BUSHING PRODUCTION AREA
Certification

- ISO/TS 22163 (IRIS-International Railway Industry Standard) by DNV-GL
- AS-9100 Quality Management System Standard for Aerospace & Defence by DNV-GL
- ISO-9001 Quality Management System Standard by DNV-GL
- ISO-14001 Environmental Management System Standard by DNV-GL
- OHSAS-18001 Occupational Health & Safety Management System Standard by DNV-GL
- 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
- Research and Development Centre recognised by Ministry of Science & Technology, Govt. of India
- NADCAP approval (National Aerospace & Defence Contractor Accreditation) for MIG & TIG Welding from PRI, USA
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