



KEL

KERALA ELECTRICAL & ALLIED ENGG. CO. LTD.
A Government of Kerala Undertaking



WE ARE KEL. THE PRIDE OF KERALA

A Multi-Product Engineering Company with 50 plus years of experience and expertise in Engineering Industry, and now proudly serving an envious client base including Defence, Irrigation and Power Projects, Space Research Organizations, State Electricity Boards, Indian Railways and the General Public both in India and abroad. The Company which is a Public Sector Undertaking fully owned by Govt. of Kerala has four state-of-the-art manufacturing units spread across Kerala and has a pan India presence with its Sales and Service unit in all major metros and selected cities.



OUR STRATEGIC BUSINESS UNITS

TRANSFORMER DIVISION

- Distribution Transformers upto and including 2500kVA, 33 KV Class
- Medium Power transformers upto 8000 kVA, 33 KV Class
- Corrugation Transformers upto 1000kVA, 33 KV Class
- Solar Transformers
- Amorphous and wound core Transformers
- Special Application Transformers such as EMU, LOCO Transformers for Railway application.
- Dynamic Reactive Power Compensation and Furnace Transformers
- A new Plant for the Production of Power Transformers up to 25MVA, 132KV class, is nearing its completion

STRUCTURAL ENGINEERING DIVISION

- Design, Fabrication, Supply Execution and Commissioning of Automatic Tilting Gates, Hydraulic Gates, Penstocks, Draft Tube Gates etc. on Turnkey basis for Irrigation/power projects
- Design, Fabrication of Bogie Frames, Bogie Bolster and Headstocks for Railways.
- Design and Construction of different types of Bridges with Steel column, Single /Double concrete column
- Design and Construction of Industrial and Commercial Buildings
- Construction of Roads and other Civil Works..
- Renovation/Development of Tourism Centers
- Interior Furnishing works
- Supply Erection And Commissioning Of Solar Power Plant System

TRAIN LIGHTING ALTERNATOR DIVISION

- Inductor type brushless alternator for train lighting and Air-Conditioning -2.5 kW to 25 kW with RRU/ERRU
- High frequency alternator – 400 Hz; upto 100 kVA capacity
- Ground power units for starting Avro and Dornier aircrafts and for powering Boeing aircrafts
- Ground Support units with dual voltage system for starting fighter aircrafts
- DC, AC power frequency and high frequency power pack for missile firing auxiliary power support
- Supply and Installation of High Mast lighting system
- General Purpose Diesel Generator Sets

KEL LIGHTING DIVISION

- LED Bulbs of various capacity suitable for Industrial and domestic applications including High Mast and Mini Mast Lights

CAST RESIN TRANSFORMER DIVISION

- Cast Resin Transformer (CRT) up to 1600 kVA
- Vacuum Pressure Impregnated Transformer (VPI) upto 1000 kVA
- Fuse switches

OIL IMMERSED TRANSFORMERS

Established in 1969 at Mamala, about 15 km from Kochi on a plot area of 52000 sq.m with a shop floor area of approximately 2700 sq.m. This unit was initiated with technical assistance from 'BHEL' to manufacture Distribution Transformers. Now it is one of the major players in the Transformer Industry with a rolling out capacity of 1500 MVA per annum.

This division boasts of a long sustained list of extremely satisfied clients, many of whom who have stood by KEL for decades. Over these years KEL has managed to make a brand name of its own in the transformer industry with its Highly Durable, Reliable and Energy Efficient Transformers. Relying on the unmatched quality of KEL transformers, electricity boards across India perfectly maintain a healthy power distribution supply system. Manufacturing custom-built transformers, for specific requirements, is yet another speciality of KEL.

This unit is one of the first transformer industries in Kerala to avail BIS Certification for Distribution Transformers and first few in India to get ISO 9001 Certification. With lakhs of transformers working safely in Transmission and Distribution network, and thousands in production line this unit of KEL stands tall with pride.

DISTRIBUTION TRANSFORMER – OIL IMMERSED

- 25 kVA to 3000 kVA upto 33 kV class as per is 1180 energy efficiency levels
- First in Kerala to avail BIS certification for transformers
- 2700m² plant area in 13 acres of land at Kochi fully dedicated to manufacturing of oil immersed distribution transformers
- Annual rolling out capacity of 1500 MVA
- ISO 9001-2015 accredited
- Awarded 4g exemption under KTPP act in Karnataka to supply transformers directly to ESCOMs without any tendering process
- 35 % purchase preference and 15 % price preference from KSEBL

MEDIUM POWER TRANSFORMER

- Capacity to manufacture upto 8 MVA 33 kV class
- New plant to manufacture 25 MVA 132 kV transformer is nearing its completion at Kochi
- Successfully type tested and supplied 5 MVA transformer to KSEB and other private customers
- Type testing of 8 MVA transformer for KSEB is under progress

CORRUGATION TRANSFORMER

- Manufactured upto 1000 kVA 22 KV class
- Compact design
- Hermetically sealed type
- Supplied as package substation

SPECIAL TRANSFORMERS

- Electric Multiple Unit Transformer For Indian Railways
- Successfully Type Tested 1550 kVA 25 KV /782V Transformer At CPRI
- Supplied 7 Nos Of Solar Transformer Of 630 kVA And 400 kVA Rating To KSEBL
- Furnace Transformer
- Booster Transformer
- Reactors for power packs
- Wound Core Transformers
- Amorphous Core Transformers



POWER TRANSFORMERS

Empowering the world with KELPower Transformers

KEL, a PSU wholly owned by Govt. of Kerala has been engaged in delivering quality distribution transformers cater to the requirement of various State Electricity Boards, Utilities and Private Customers since its inception in 1968.

KEL takes a bold step in the path of power transformer production by setting up a new eco-friendly plant. Power transformers ranging up to 25 MVA, 132 kV Class with an annual production capacity of 1500MVA, is another milestone achievement of KEL.

Features

- State of the art manufacturing Unit located at Mamala in Ernakulam District assures world class quality.
- Strategically located to reach all modes of transport.
- Advanced Design and latest technology that meets international standards exhibits a customer centric approach that withstands short-circuits, Lightning impulse and switching surges.
- User friendly technology designed to keep the oil & winding temperatures and hotspots under control.
- EHV test Lab designed especially for zero errors ensuring flawless product acceptability.
- Static test equipment installed at our works ensures all kinds of routine tests besides no load loss test, load loss test and induced over voltage test.
- Stringent quality checks for raw materials and uncompromising testing procedures make KEL power transformers unique.
- Prompt planning for timely Delivery.
- Highly skilled manpower resources.
- Excellent after sales service support to the satisfaction of the customer.



Product Range

- 5MVA to 25MVA 132kV Class Power Transformer
- Upto 25MVA Two/Three winding Single/Three Phase Power Transformers of 132 kV Class.
- 16 kVA to 2500 kVA 33kV Class Distribution Transformers as per IS 1180 : 2026
- Corrugation Transformers.
- Traction Transformers
- Booster Transformers
- Furnace Transformers
- Reactors.

Plant Facilities

- Highly advanced Transformer Test Lab
- Fully automatic Vacuum Drying Oven with minimum process time
- Semi Automatic Winding Machines
- 2500 sq.m dedicated shop floor area

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CAST RESIN TRANSFORMERS

To cater to the growing demands of dry type transformers, a most modern plant with semi automated manufacturing and testing facility was established at Edarikode in Malappuram district with a plant area of 1350 sq. m and an annual production capacity of 300 MVA, this unit has every means to supply good quality transformers with remarkable delivery period.

Every single transformer manufactured and tested in this plant undergo stringent quality checks and measures it lives up to the brand name KEL has gained over these years. In addition to this plant a 1200 sq. m plant fully dedicated for the production of oil immersed distribution transformer is being operated here with an annual rolling capacity of 120 MVA.



ALTERNATORS

This ISO 9001 certified unit was started in the year 1964, with technical know-how from EVR of France, for the purpose of manufacturing Brushless Alternators, required for Indian Railway in Lighting & Air-conditioning of Coaches. We were the one to introduce this item to indian railways in 1969 and still we are the pioneers in this field.

The unit has an installed capacity of 3500 numbers of alternators per annum. With over 60000 numbers alternators in service in the Indian Railways, We enjoy leadership status in the segment. Our alternators of various rating are in service with several Indian Defence establishments.

Our major customers are Indian Railways, Bharat Heavy Electricals Ltd, Crompton Greaves Ltd, L & T, Bharat Earth Movers Ltd, SAN Engg., and Speed Craft, Hyderabad etc. Besides, could garner orders for Alternators from countries like Tanzania, Korea, Senegal, Bangladesh, Sri Lanka etc.

MAJOR PROJECTS

- Falcon Missile Project - Vehicle mounted 62.5 kVA 415v, 50 hz, 3-phase DG set for R&DE engineers working on falcon missile project
- Thrisul Missile Project -35 kVA + 15 kW dual output DG set for Trishul missile project through DRDO, R&DE engineers, BEML/BD
- Prithvi Missile Project - 2 kW 30V, 3000rpm DG set for prithvi missile project through DRDO, R&DE (Engrs.), BEML/BDL
- Pinaka Project - 12 kW, 30V, 400A alternator for Pinaka project, L&T
- 20 kVA, 400Hz for defence application in Indian Air Force, Paras with dual voltage system for starting fighter aircrafts.
- 5 kVA, 400Hz, DG set for defence application R&DE engineers
- Akash Missile System
- Military Power Car
- Radar Application
- Ground power unit for aircrafts for starting Avro and Dornier aircrafts and for powering Boeing aircrafts



STRUCTURAL DIVISION

The Structural Engineering Division of KEL in its Mamala Unit, specializes in the design, fabrication and commissioning of hydraulic gates and hoists and their controlling equipment used in dams for power and irrigation projects. Many such projects have been successfully executed, by this division on a turnkey basis, all over India.

The KEL structural division, with a capacity of 1200 MT per annum undertakes the design and construction of steel bridges, factory buildings, storage tanks, fabrication of pressure vessels and other industrial steel structures, as per customer specification. For the Railways, KEL undertakes the fabrication and manufacture of bogie frames, bogie bolster, head stocks for railway coaches and wagons.

MAJOR PROJECTS

- Fabrication, Supply, Installation and Commissioning of Automatic Tilting Gates, Hydraulic Gates, Penstocks, Draft Tube Gates at various dam projects at Karnataka Neeravari Nigam Ltd., Karnataka Power Corp. Ltd.
- Fabrication, Supply, Installation And Commissioning Of Penstocks, Draft Tubes Brindavan Hydro Power Pvt. Ltd., Shimoga
- Bogie frames and bolsters for BEML, EMU coaches for ICF
- Industrial and commercial building works for textile mill at Kuttipuram, Chemi-Mech. plant for HNL Ltd., NCRMI, traco cables co., KEL Edarikode and Mamala
- Suspension bridges for Revenue Dept. & Tourism Dept., Government of Kerala
- Lattice bridges for Revenue Dept. & Tourism Dept., Government of Kerala
- Renovation of Tourism centers for Tourism Dept, Government of Kerala
- On line examination centers for public service commission at Ernakulam, Thiruvananthapuram, Pathanamthitta, Kozhikode and Kasargod for Government of Kerala
- Installation and commissioning of 0.5 MW grid tied ground mounted solar project at Kuttipuram for KSEBL
- Installation of 50 kW solar plant for Chalakkudy municipality

FUTURE FOCUS

KEL is now transitioning to the new electricity era. With Indian government planning to outfit approximately 35 million customers with smart meters by the end of 2020. A brand new opportunity opens for KEL to diversify their portfolio.

India aims to be a 100% EV nation by 2030. Indian government planning to spend nearly

INR 1.8 lakh crores in electric vehicle infrastructure to meet the target till 2030. KEL's Brushless DC motor experience makes it a seamless transition to this exciting new business segment.

As India targets 100 GW of solar capacity (including 40 GW from rooftop) by 2022, the field is ripe for KEL to explore opportunities.



TRACTION MOTORS FOR E-VEHICLES



SMART ENERGY METERS



SOLAR POWER PROJECTS



CONSTRUCTION & ERECTION



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Company Profile

Established in 1964 in the State of Kerala, India, the Kerala Electrical & Allied Engineering Co. Ltd. (KEL) is a multifaceted company fully owned by the Government of Kerala. Through its four production facilities, located in various districts of the State, this ISO 9001:2000 compliant company provides basic engineering services/products besides executing projects of national significance for high profile clients like the national defence establishments, the Indian Railway, Central PSUs etc.

Besides heavy structural steel fabrication works, the company manufactures and markets products like general purpose brushless alternators, brushless alternators for lighting and air-conditioning of rail coaches, Medium power & Distribution transformers and Resin Cast Transformers.

Core Values

- Fairness, Transparency, Integrity
- Trust and Mutual Respect
- Responsible and courteous service
- Passion for Professional and Operational Excellence
- Corporate and Social Responsibility



Structural Division

The Structural Engineering Division of KEL in its Mamala Unit specializes in the design, fabrication and commissioning of Hydraulic Gates, Hoists, Penstock Pipes and their control equipment used in dams for power and irrigation projects. Many such projects have been successfully executed on a turnkey basis, all over India.

The KEL structural division, with a capacity of 1200 MT per annum undertakes the design and construction of steel bridges, storage tanks, fabrication of pressure vessels, factory buildings and other industrial steel structures, as per customer specification. The Division possesses a full-fledged shop having floor area of 2000 Sqm. This shop is fully equipped with modern machineries such as 10MT EOT crane, Gear Hobbing Machines, Guillotine Shearing Machines, Radial Drilling Machines, Capstan Lathes, Milling Machines etc.





Activities of Structural Division

- ▶ Design and Execution of Hydro-Mechanical Equipment such as Gates, Hoists, Penstock Pipes etc.
- ▶ Manufacture and Supply of bogie frames, bogie bolster, and head stocks for railway coaches and wagons
- ▶ Design and Construction of Lattice Bridges
 - Pedestrian Foot Bridges
 - Light and Medium Vehicular Bridges
- ▶ Design and Construction of Suspension Bridges
 - Steel Column Bridges
 - Single Concrete Column Bridges
 - Double Concrete Column Bridges
 - Space Frame Bridges
 - Cable Stayed Bridges
- ▶ Design and Fabrication of Industrial Storage and Power Transformer Tanks
- ▶ Design and Execution of all Civil and Electro-Mechanical Works





Hydro-Mechanical Projects

The structural Division at KEL has an extensive history and commendable expertise in the field of fabrication, supply, erection and commissioning and testing of equipment for Hydro-Mechanical projects which includes hydraulic gates, hoists, penstocks and their control equipment used in dams for power and irrigation projects for Govt. Agencies all over India.





Railway Coaches and Wagons

The structural Division at KEL has undertaken the fabrication, manufacture and supply of bogie frames, bogie bolsters and head stocks for railway coaches and wagons for the Indian Railway.





Lattice & Suspension Bridges

KEL has established itself as a leader in design and construction of Lattice & Suspension Bridges using the most modern and innovative bridge construction techniques. We have a proven track record of having successfully constructed more than 75 bridges throughout Kerala.





Industrial Storage & Power Transformer Tanks

The Structural Division at KEL has a state of the Art Industrial Storage & Power Transformer Tank Design Division and fabrication facilities and have designed, fabricated and supplied industrial storage tanks, pressure vessels and power transformer tanks for BPCL, TELK etc.





Civil and Electro-Mechanical Works

KEL has a full-fledged in-house facility to design, manufacture and execute various civil & electro-mechanical works lead by Engineers with more than 25 years' of experience. We have an expert panel of Civil, Mechanical & Electrical Contractors and Consultants and have completed projects worth more than 500 Cr. since 2017 for various Govt. Department/Agencies.









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