



# **EVORAIL**

## **Evolution in Rail Technology**



# ABOUT US

Evorail provides technology solutions to the railway industry. It specializes in the repair and rebuild of locomotives, manufacturing of shunting locomotives, supply of spares, maintenance and asset management services. It also offers railway operation and project management services. Its clients are large companies, governments and institutions in Africa, South America and the Middle East. Evorail has partnerships with international technology providers including CAF (Spain), ABB, TSA (Austria), ATS (USA), Caterpillar, Cummins and several South African manufacturers.

## TARGET MARKET



Evorail targets are the African, South American and Middle Eastern railway markets. These markets are open and in need of Rail Engineering services. The essential common denominator is light the rail system i.e. rail gauges.

Evorail was born out of the African railway industry where aging rolling stock is kept operational through life extension programs which offer no improvements to technologies and operations. Services offered by Evorail break the mould of traditional life extension program through the application of systems modernisation, technology application and integration. This results in reduced operating cost, improved capability and improved performance often beyond the original equipment design. These services include:

### DIESEL ELECTRIC SHUNTING LOCOMOTIVES

Born out of the need for an efficient and low cost shunting locomotive offering in Africa. Evorail has acquired the capability of manufacturing shunting locomotives which can service the train building, short haul and branch-line requirements of end users. Many of the features are customizable and the basic specifications include:

- 700HP engine - possibility to upsize
- In-house developed digital control systems
- Cape and Meter gauge wheel gauge configurations
- Continuous Tractive Effort: 150 kN @ 10km/h
- Starting Tractive Effort: 200 kN
- Total mass: 60 tonnes
- Traction motors: 3 x 761A23



## → CONTROL SYSTEM UPGRADING OF LOCOMOTIVES

Our in-house designed control systems make use of rugged components developed for the railway environment. These systems are scalable and can be retrofitted to any locomotive to improve performance, reliability, security and facilitate troubleshooting and maintenance. The standard features of the full control system include the following:



### STANDARD FEATURES

- Traction Control
- Main Generator Control
- Advanced wheel slip / slide control
- Traction Motor Protection and Management
- Trip Computer
- Fully customizable Vigilance System
- Customizable Touch Driver's Interface
- Parameters display
- On-screen diagnostic
- Local on-screen parameter setup
- Customizable data recording
- Automatic sanding
- Traction Motor Cut-out Control
- Anti-Plugging Protection
- Faults and alarm display
- Remote access

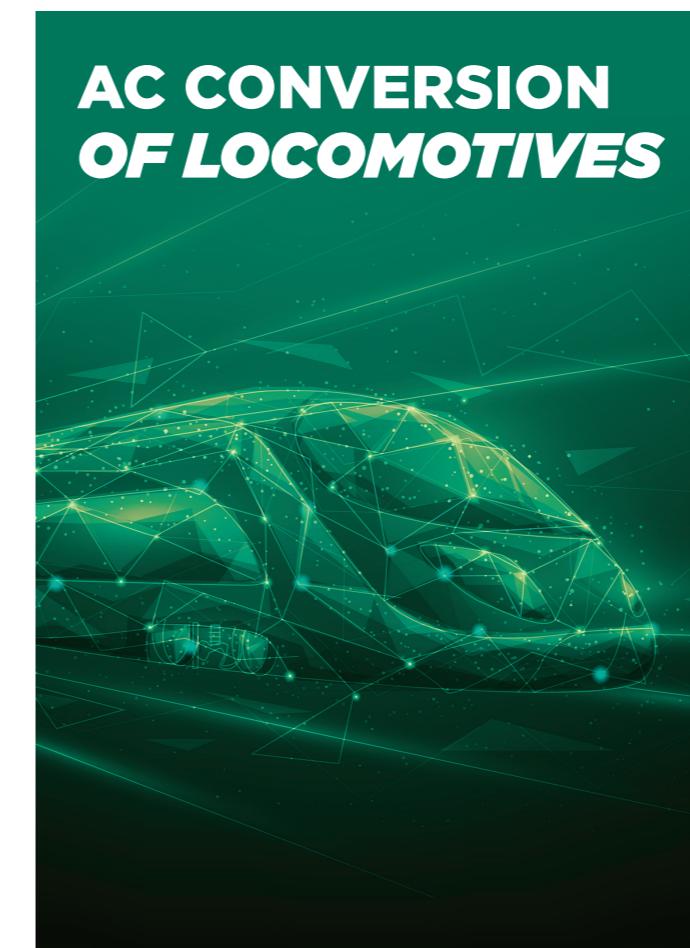


## EVOLIGHT

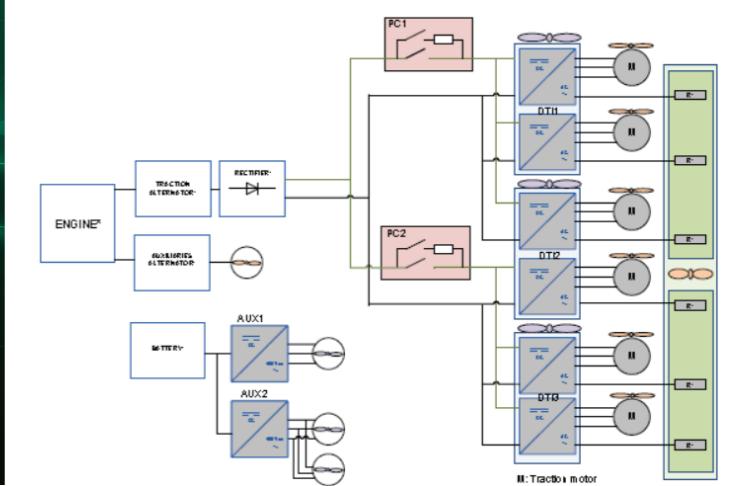
- LED Lights for conventional Locomotives and wagons
- Reduced operating cost
- Life expectancy of solution is approximately 10 years producing a cost savings over the life of the product compared to current methods
- 60-110VDC supply
- Anti-glare
- Impact resistant material



## AC CONVERSION OF LOCOMOTIVES



Remanufacturing and overhauling extend the life of aging locomotives. Modernisation through conversion to AC technology at the same time will both increase tractive effort performance by 10% to 15% and add 15 to 20 years to the life of your locomotive. Modernisation costs are about 60% of a new locomotive. Running cost is also reduced because AC powered locomotives require lower maintenance.



# ASSET MANAGEMENT

Managing a fleet of locomotives and rolling stock across long distances requires advance systems. Having the information at the fingertips allows an operator to extract maximum performance from the assets as well as managing driver behaviour and maintenance costs. Evorail provide the following Asset Management functions:

- Real time monitoring
- Performance and availability reports
- Driver management
- Web Based customizable interface
- Accident investigations
- Maintenance management
- Fail-safe data logger



## TRAINING

Evorail makes use of state of art technology for drivers and fitters training. The training is customized to meet customer's requirements and covers the different sections of rolling stock maintenance and operation:

- Driver behaviour, operation and track knowledge through our high quality simulators. These simulators can be designed to match the customer's network and locomotives.
- Mechanical works
- Electrical works
- Brake systems
- Control systems
- Wheel cutting
- Rail operations
- Engine maintenance and use of specialized tools



## GPS SPEEDOMETER

Our GPS speedometer is a reliable replacement for axle encoder speedometers used on old locomotives. It is fully programmable with a built-in speed limit alarm. It also features backlighting, a digital display, clock, trip counter, running hours counter and an engine rpm dial. Can be supplied directly from the locomotive's battery voltage.

## PARTS SOURCING

We specialise in the sourcing of obsolete or hard to find parts. We are a supplier of consumables and repairable electric and diesel-electric locomotive and rolling stock spare parts. We can source parts for locomotives manufactured by GE, EMD, ABB, ASEA, Hitachi, GEC and Alstom.

Supply chains developed over many years has also provided us with the ability to source non-OEM parts manufactured in South Africa to original OEM specifications.

Our key strengths are in our ability to source, network and deliver and our clear understanding of the industry, equipment and our clients' requirements.



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