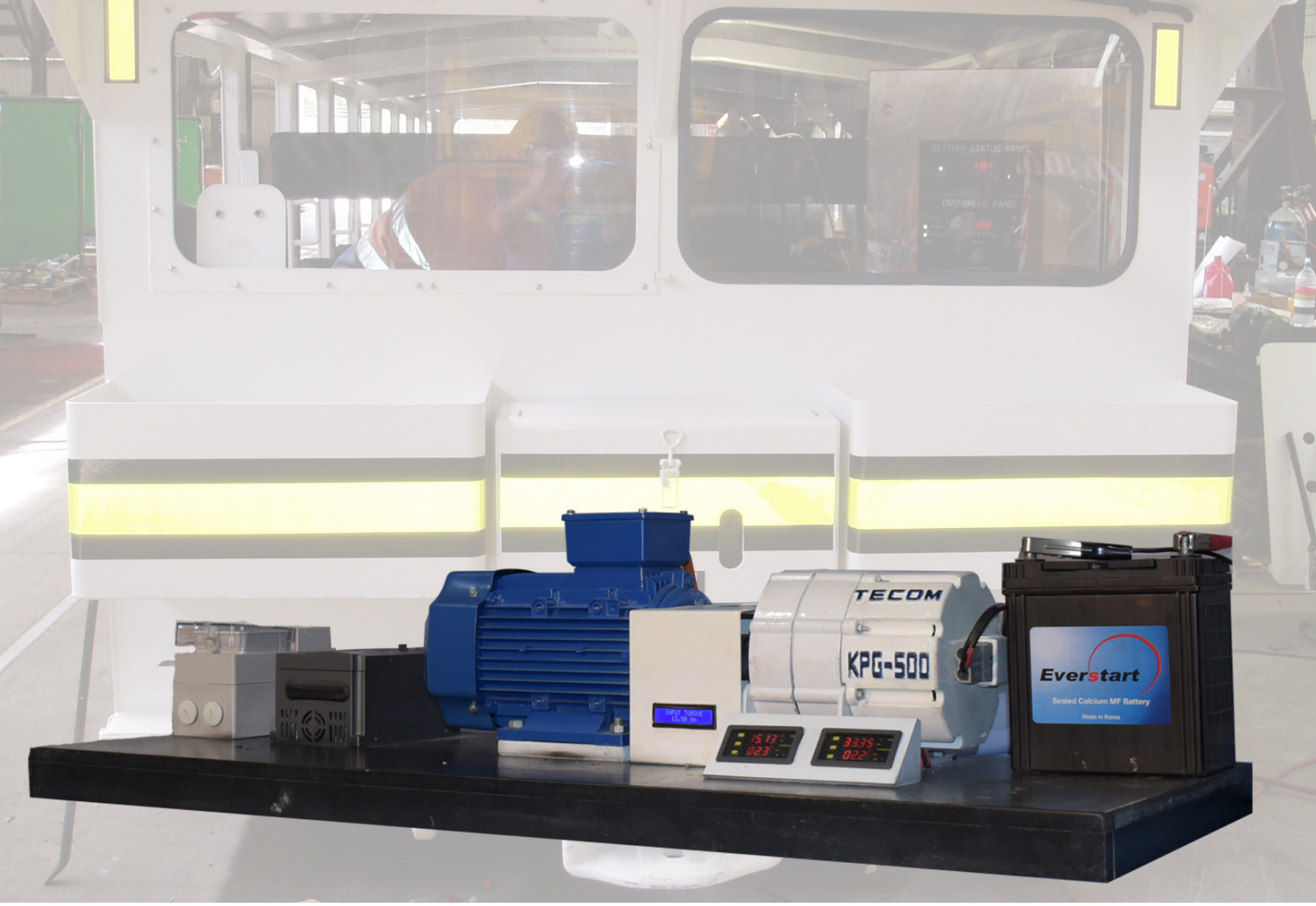

KPG-500

KINETIC POWERED GENERATOR

Onboard Battery Charging System

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TECOM

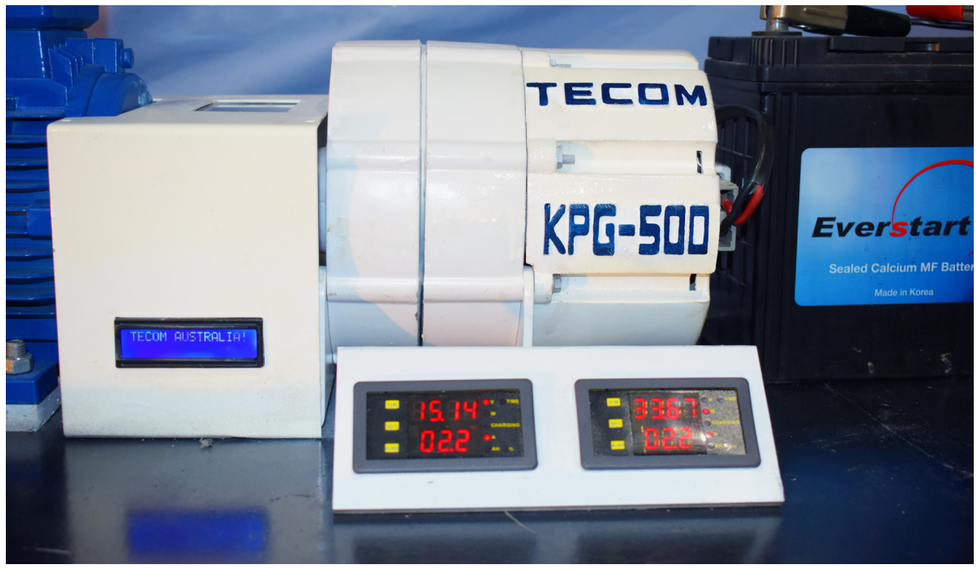
THE TASK - REPLACING USED ENERGY QUICK AND EASY

In mine sites worldwide, batteries are used when no other source of supply is practical.
This includes:

- Functional operational restrictions
- Environmental conditions
- Physical design (equipment)

Although batteries are very reliable today and store a great deal of energy to be delivered as required, the energy used must be replaced by a charging system.
With mobile plant and equipment this is generally achieved by one of the following two methods:

- Continually swapping batteries in and out of charging stations
- Onboard charging systems (alternators/generators)



SWAPPING BATTERIES

The continual swapping of batteries quite often leads to both the batteries' life and electrical capacity autonomy being adversely reduced over time, as these effects usually occur when large amounts of energy have repeatedly been consumed/removed.
When batteries are then placed onto the charger, a higher and longer charge currents is required, which again causes a reduced life span.

THE SOLUTION - ONBOARD CHARGING OF BATTERIES

ONBOARD CHARGING

Onboard charging systems are considered the best way to keep the batteries at an optimal level. Whilst in most mobile equipment applications the onboard generator/alternator is driven by an engine, there are some that use kinetic energy derived from the angular rotation of a wheel, such as:

- Mine site Winder Conveyances on Hoisting Systems – Cages, Skips, Dolly Cars for both men and materials operations.

One issue faced by Kinetic Powered Alternators is that they require a relatively high speed of angular shaft rotation to create sufficient voltage to effectively charge the batteries, typically over 1500RPM.
Often, these conveyances will travel at very low speeds, not readily allowing sufficient rotation to achieve sufficient charging current. Therefore, depending on the duty of operation, the batteries would still require to be swapped out for off-conveyance charging as well, although on a less frequent rotation.

A BETTER SOLUTION - LATEST TECHNOLOGY

TECOM Australia has designed a KINETIC POWERED GENERATOR (KPG-500) capable of delivering a charging current on either12 VDC or 24 VDC battery supplied systems.
The KPG-500's advantages over existing equipment are:

- Charging current can be obtained as low as 300RPM
- Peak charging performance occurs at 600RPM
- Capable of producing 500 W at the required voltage

In summary, TECOM's new KPG-500 KINETIC POWERED GENERATOR is capable of delivering an impressive 20 Amp charging supply from previously wasted kinetic energy at the required voltage.

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