

## **ELECTRIC TRACTION DRIVES**

### **CONTACTORS VERSUS SAMINCO A812 SOLID-STATE SYSTEM**

The contactor/resistor speed controller has been used for 100 years to control the speed of electronic traction drives on railed equipment. During the past 15 years, solid-state speed controllers, such as the Saminco A812 system, have become available offering greater reliability, smoother operation, and the capability to provide regenerative braking.

The main **advantages** of the A812 system compared to a contactor/resistor controller are:

- Smoother acceleration, better track adhesion during acceleration
- Regenerative braking – provides smooth, safe braking, reducing wear on mechanical brakes
- Automatic overspeed protection (when used with battery supply)
- More efficient! – Operating range per battery charge is extended
- Simpler to maintain than complicated contactor/resistor panels
- More compact – The A812 requires less space than a contactor system

The main **disadvantages** of the A812 system compared to a contactor system are:

- Higher initial cost
- May not be suitable for shipment to third world countries with limited service back-up capability