STEEL SLEEPER
DEVELOPMENT

OVERVIEW

Although steel sleepers have been used for over 100 years, IRT initiated a research program in 1978 to assess the applicability of steel sleepers to the Australian market. Combining this effort with market developments carried out by railway companies, up to 500,000 steel sleepers per annum have been installed into Australian railroad tracks. Present domestic usage is about 13% of track, predicted to grow to 25% by 2020.

CUSTOMER BASE

Steel sleepers are currently in use across the Australian railway industry including:
- Insulated sleepers for the Brisbane Suburban and North CoMain Lines
- Non-insulated systems for QR’s Mount Isa line
- Insulated and non-insulated sleepers on NSW Class 1 and tracks (up to 25 tal)
- Non-insulated systems for Emu Bay (80% coverage) and Tasrail (65% coverage)
- General usage in Western Australia since 1979 (primarily interspersed)

RESEARCH PROGRAMS AND OUTCOMES

The success of steel sleepers has been through minimising costs and working closely with railways to ensure superior performance. Research programs have included:
- Structural Design
- Fastening Performance
- Field Testing
- Mechanical Testing
- Valuing and Using Customer Feedback for Further Research

BENEFITS

- Steel sleepers have provided Australian railways with a serious alternative to concrete and timber.
- Steel sleepers have provided OneSteel with a market for 30,000 tonnes of finished steel product.
- Excellent track performance is achieved through full re-sleepering with steel.
- Existing track structures can be interspersed with steel sleeper as a temporary measure to maintain track capacity.