

Wagners Composite Fibre Technologies (CFT) is a world leader in the use and development of composite materials for civil engineering applications and is credited with manufacturing and installing the world's first composite road bridge in a public road network. Ongoing research and development have resulted in Wagners CFT remaining a leader in the implementation of additional applications for this exciting new product.

Originally developed for the aerospace industry, composite fibres are now being used for transportation, sports and medical science applications. However, it is not until recently that the vision to build large structures has been fully realised by the innovative staff at Wagners. Many years of research and development have resulted in the successful application of composite fibre technology to a number of commercially available products including road bridges, electrical cross arms and boardwalks and prototype developments for semi-trailers and conveyors.

# **COMPOSITE PRODUCTS:**

## Composite Board Walks & Pedestrian Bridges

As a result of environmental concerns and the worldwide decrease in rainforests hardwood timber is becoming increasingly expensive to obtain and to varying quality. Even the best timbers are susceptible to termite and marine borer attack and use potentially environmentally harmful preservatives. Wagners CFT have designed and produced composite fibre boardwalk members that are aesthetically pleasing, light weight to install, can be easily prefabricated and will never rot of rust. Wagners innovative boardwalk design allows composite structural members to be integrated with any type of pier, decking or handrail systems, including timber or steel.

### **Innovative Qualities**

- Aesthetically pleasing and available in a range of colour options
- Light weight
- Fast, simple installation
- Can be easily prefabricated
- Will never rot or rust

### **Composite Bridge Decks**

Wagners Composite Bridge Decks are designed to utilise the lightweight nature of composite fibre technologies allowing for greatly reduced installation times and consequently minimum disruption to traffic. An additional benefit is the non corrosive properties of composites which dramatically reduce whole of life costs. Wagners produced composite road bridges are, on average, approximately one third the weight of comparable concrete bridge deck structures, compisute decks contain no corrodible materials, hence giving end users a bridge with reduced maintenance requirements as well as security of an accurate design life estimate. The design ingeniously utilises concrete and composite fibres to best suit the relevant material properties.

### **Innovative Properties**

- > High strength to weight and stiffness to weight ratios
- Corrosion and fatigue resistance
- **Tailorability**
- Increased load bearing without an overall increase in load on supporting structures
- Potential for use in areas where longer spans are required, or where lower weight would translate into increased seismic resistance
- Sizeable reduction in ongoing maintenance costs
- Increased lifespan compared to alternate bridge designs

#### **Composite Cross Arms**

The current decay rate of timber electrical cross arms, exacerbated by the shortage of suitable hardwood for timber for use in the Australian Electrical network has resulted in Wagners CFT embarking on a program to commercially produce composite electrical cross arms for world-wide distribution.

#### **Innovative Qualities**

- One third the weight of timber
- ) Inert
- Non-conductive, with properties that can be altered to particular requirements
- Durable, composite products will not rot or corrode leading to an extended life span of up to 40 years
- Eliminates pole top fires
- UV and humidity tested
- Reduces the use of hardwoods, and therefore the impact on the environment

For further information visit www.wagner.com.au







