

# Galserv<sup>®</sup> guards steepest railway for 30 more years

**When Australia's most visited ticketed tourist attraction, the Scenic Railway in the NSW Blue Mountains recently underwent a major refurbishment, hot dip galvanizing (HDG) demonstrated its value for the facility in such an extreme environment where maintenance is so impractical.**

The \$30 million refurbishment program included an overhauled track and two new station platforms, new state-of-the-art carriages and winch system. ASI member, Galserv<sup>®</sup> provided the project with 164 tonnes of HDG steelwork integrated into all facets of the project. This included new loading and unloading platforms and stairs for top and bottom stations, service walkways, bottom station towers, module walkways, equipment platforms and a balcony extension, totalling 17,855 individual steel components.

The platform frames and steps for the lower and upper stations were the largest components for galvanizing and needed to be designed correctly from the outset with optimum drainage and venting in mind. They also required extra special handling to avoid any potential distortion or touch ups. Galserv<sup>®</sup> production staff on all three shifts across an uninterrupted, continual 24 hour cycle exercised good communication during shifts and at changeover times to ensure consistent high quality finish and fast turnaround.

With the railway 52 degrees at its steepest grade to the Jamison Valley floor 310 metres below, the project team was presented with two major obstacles that required innovation and unique work methods to overcome. Galserv<sup>®</sup> worked very closely with ASI fabricator, Combell Steelfab. The key was maintaining constant communication and understanding the scheduling requirements of the project, staying flexible to Combell's changing demands.

Due to the nature of the landscape, traditional methods of construction were not possible. There was no way of transporting piling rigs, excavators and backhoes down to the valley floor, nor could they crane structural steel members or pallets of scaffolding to the bottom of the valley. HDG offered the best overall solution for this world class tourist attraction with a minimum 30-year long design life providing the lowest overall cost of asset maintenance for its design life whilst satisfying essential aesthetic demands for the popular tourist attraction.

What really complicated the task was the client's requirement to minimise disruptions to operations and allow Scenic World to continually operate during construction. Not only was this a requirement to ensure continuity of operations to the site's two other existing rides, but it was also required that the railway be constructed while the existing structure remained largely operational.

The HDG provided a robust coating with superior weathering capabilities, ideal for material handling eliminating the need for expensive onsite touch ups. The speed of HDG treatment allows for immediate use essential for fast assembly in all weather conditions to achieve critical milestones. This meant that the HDG had to be compatible with the tricky installation method required to meet helicopter lifts as the use of traditional transporting down to the valley floor was not possible.

That also meant it was critical that all items were readily traceable and identifiable. Galserv<sup>®</sup> provided individual tags sequenced in batch

numbers for tracking and tracing purposes through the galvanizing process. These tag numbers matched the sequence of each batch and were scheduled according to priority and customer's demands. The HDG was able to be supplied with very short lead times to meet strict project milestones whilst ensuring operational continuity.

In order to achieve this goal with due consideration to the terrain, materials handling and existing 'brownfields' structures of the site, the staging logistics and construction methodologies had to be integrated right from the beginning of the design process.

The working style with Combell was very direct and benefited from a long history of working together on previous projects. There was one main point of contact at Galserv<sup>®</sup> for Combell to maintain efficient communication in a closed loop system. Combell knew it could call it anytime and as often as required which meant that changes in schedules weren't a problem, whether with management, scheduling, production, quality through to transport.

Many of Australia's prominent tourist attractions boast a paint coating as the protective treatment of choice. The fact that galvanizing was chosen demonstrates the durable nature of the coating and its suitability for such applications.

Nepan Building and Infrastructure's Galvanising Services (Galserv<sup>®</sup>) has been providing HDG services since 1963.

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