Australian Industry WINS!

WTIA National Diffusion Networks Project (NDNP) funded by the Federal and State and Territory Governments and industry

SUCCESS STORY NUMBER RT03: TOP EXPERTS ON STEEL STRUCTURES AND INFRASTRUCTURE – *Technology Demonstrations by experts from the US and Japan bring world's best practice to the Australian road transport and rail industries*

The Story

With the assistance of Mr Krishna Verma, Principal Bridge Engineer, US Federal Highway Administration (FHWA) and his senior management, WTIA brought four key engineers from the USA and Japan to Australia to demonstrate various technologies related to steel structures. The knowledge and application of these technologies will contribute significantly to the effective design and maintenance of Australia's road and rail infrastructure in improving life cycle cost and fatigue life of steel bridges, traffic sign structures and light poles.

The Technology Demonstrations were held in five mainland state capitals, and were supported and attended by the Members of the WTIA's Road Transport Industry Sectoral Project; Main Roads WA, Transport SA, VicRoads, RTA NSW and Queensland Main Roads.

With over 160 delegates attending, and excellent feedback from all sessions, this has been another outstanding success for the NDNP, and of course, for Australian industry.

Latest Technologies for Safer Infrastructure

The presentations included the latest information on heat straightening repairs of damaged steel members, bridge maintenance, rotational capacity testing of fasteners, ultrasonic impact treatment and U-shaped ribs to improve fatigue life of poles and arms.

Mr Verma was accompanied by Mr Lionel Tehini from Applied Ultrasonics, USA and Mr Masakazu Sugimoto and Mr Tetsumi Kondoh of Nippon Steel, Japan. Their coordinated presentations gave industry a fascinating insight into the latest procedures and innovations in road and rail infrastructure manufacture and maintenance in the USA and Japan.

Case studies showed applicability to Australian infrastructure as well as the structural steel and mining sectors. They also illustrated the working relationship between an organisation such as the FHWA, the contractors and the regulatory authorities in the US.

Company Visits Lead to Future Cooperation

In each city, the visiting experts were taken to meet with the senior management of each of the road authorities, to facilitate interactive discussion of local issues and their potential solutions.

These follow up meetings were most valuable. Applications were emphasised, while keeping focus on rationalising all aspects of the technologies demonstrated.

Excellent outcomes were achieved at the meetings, with expected benefits including:

- improved integrity and hence safety of structures;
- greater collaboration and strategic partnership between the USA and Australia;
- enhanced two-way sharing of information to benefit both countries.

Company visits were also arranged, with the opportunity for Australian inspection companies to discuss the ultrasonic impact treatment equipment demonstrated by Mr Tehini. This treatment is not yet available in Australia, and is considered to be a real potential solution to issues of fatigue in essential structures such as road and rail bridges.

Local Australian companies manufacturing poles and signs were particularly interested in the innovative steel designs discussed by Mr Sugimoto and Mr Kondoh from Nippon Steel. The quality manufacture of safe roadside equipment has been a major issue for road authorities, as for the Australian travelling public.

Delegates in Perth examine equipment presented by Lionel Tehini of Applied Ultrasonics USA

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