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Ground Control Technology
for the Mining and Tunneling Industry
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Brighter grip

Tuesday, 27 July 2010
Blair Price

SLIPS, trips and falls injuries are common in the coal industry. To help tackle the issue, NLT Australia plans to integrate fibre-optic lighting into Klein Architectural Group's innovative handrail to improve visibility and safety underground.

The KAG rail is not only stronger and more durable than standard handrails, but the unique swage pattern makes it easier to hold on to.

Last year, Queensland University of Technology found the KAG handrail provided an 80% better grip than standard handrails.

While the advanced handrail can suit a variety of surface applications such as on coal-handling and processing plants or on draglines, longwall communications specialist NLT is keen to enhance the handrail for the underground coal sector.

NLT distributes the KAG handrail but will also trial the bolt-on application of fibre-optic lighting around the rail.

By using the bright LED light from one its cap lamps, the light can be further boosted through a lens before bouncing off a reflector and into 20-core fibre-optic lighting which can be attached externally to the handrail and even on the back of a PJB.

This method will create 20 little lights out of the one light source, but the trials are yet to determine how bright it will be underground.

Using the PJB example, NLT Australia managing director Tim Haight told *ILN* the lit KAG handrails would help miners find the rails to grab on to and could shine light on the floor to allow them to see tool bags and other gear so they were less likely to trip over it.

Lit handrails on the side of the machine will make people walking by the vehicle more visible and can also be used to get a better footing.

Haight is also keen to incorporate fibre-optic lighting into NLT's visual alert system which is under development.

KAG project coordinator Glenn Klein told *ILN* the two companies were targeting the fibre-optics lit version of the product for balustrade, rails and all working machinery in underground mining areas.

"Underground mining offers many and difficult challengers such as the underground mining personnel having to work on unsure and unforgiving terrain," he said.

He pointed out some of the issues with typical handrails.

"Conventional rail will, in time, become polished from continuous hand contact especially under wet, greasy or staff wearing contaminated gloves.

"The KAG rail system with its unique swage pattern will help prevent accidents."



The K.A.G. hand rail, image courtesy of Klein Architectural Group.

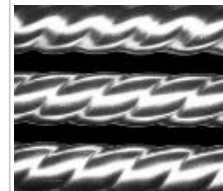


Image courtesy of Klein Architectural Group.



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