Sureline®

Application Report

Customer: Alinta
Location: Northern Goldfields Region, WA
Project: Pole installation

SURELINE® shows its value in Goldfields trial for Alinta

Leading energy infrastructure provider Alinta carried out its first trial installation of SURELINE® steel poles from BlueScope Steel in the testing conditions of Western Australia's Northern Goldfields region.

A recent project carried out by Alinta Asset Management to supply electricity to a new nickel mine north of Kalgoorlie gave the company the opportunity to examine new options for dealing with challenges presented by distance, freight costs, termites and bushfires.

Brendon Chambers, Alinta's Goldfields Area Manager, supervised the installation of an 11kV line to take power from LionOre's Thunderbox Gold Mine

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Above: Use of a SURELINE® two-piece transmission pole removed the need for special long-load transport arrangements.

camp 45 kilometres south of Leinster, to LionOre's newly established Waterloo nickel mine, five kilometres away.

"Up until now we have always used timber poles, but we were interested in seeing just how SURELINE® steel poles would fit into our operations, Brendon said.

"There are major termite problems in the Northern Goldfields, bushfires have also been an issue and the availability of suitable timber poles in the sizes we require is becoming less certain.

"We stood 32 poles, including a two-piece sub-transmission pole, and the rest were 14 metre single piece poles."

Use of the SURELINE® two-piece sub-transmission pole avoided the necessity for special long-load transport arrangements on red dust tracks which already present difficulties for standard length rigs.

The product support provided by BlueScope Steel contributed a positive impact to the outcome of the installation.

"I must say it was a welcome change to have a supplier stand behind its product by having one of their people fly across the country to be on site for three days while we were working with the SURELINE® poles," Brendon said.

"Mark Simpson, the SURELINE® Sales and Supply Chain Manager was on hand to brief us on installation procedures.

"Aside from joining the two-part pole and applying the anti-corrosion sleeves to all of them, the procedures are generally not all that different from the methods we would normally use with timber poles.

"We used our own truck-mounted HIABs for the 14 metre poles and only needed to use our larger capacity borer/crane for the 18 metre pole.

"Dressing the SURELINE® poles is quite straightforward. Like everything else that we do, it is just a matter of getting a system in place and then

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Brendon Chambers, Goldfields Area Manager, Alinta

away you go. It only took two poles and we had worked out an efficient system that worked for us.

"To mount cross arms on timber poles you have a long auger bit which has to go right through the pole but with the SURELINE® poles we just made up some templates to mark the hole set on opposite sides of each pole. We were using unibits and there were no difficulties at all."

Hollow section SURELINE® steel poles are made from a special grade of high strength steel specifically developed for power pole use.

Alinta initially devised its own earthing procedures for the SURELINE® poles, but has since collaborated with BlueScope Steel to develop an alternative system.

"We had to take into account our step and touch potentials," Brendon Chambers said. For this initial trial we bonded together all metal areas on

Above: SURELINE® poles are fitted with special in-ground corrosion protection sleeves and can be easily drilled to attach pole steps.

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Brendon Chambers, Goldfields Area Manager, Alinta

the poles from the overhead earth. Each cross arm was bonded to the pole and then we laid a loop of earth cable from the pole in a short trench to take care of our step potential.

"BlueScope Steel has supplied us with mesh step potential mats through which the poles can be stood and then bolted to them. In my opinion that will work quite well to satisfy our requirements."

The range of sizes of the SURELINE® poles and their availability are major factors in their favour, according to Brendon Chambers.

"In the Goldfields region the longer length poles are in widespread use because, with mining equipment on the move, you need to maintain adequate clearance under the wires," he said. "Those longer lengths are not as readily available in timber as they once were.

"We have a larger installation job that's coming up and we are definitely going to use SURELINE® poles for that one as well. In fact, all the jobs which I have quoted on since our first experience with steel poles have been quoted on the basis that we use SURELINE® poles.

"I've always been a big believer in steel. Certainly the kilonewton ratings of steel poles are much higher than you get with timber in the same size.

"Uniformity is another factor in favour of steel poles. In the three metre area where you are putting your cross arms you can get significant changes in diameter with a timber pole. That's something which we didn't have to worry about with the SURELINE® poles.

"The life span of the pole will be far superior to anything you can expect in this bushfire and termite affected region from a timber pole.

"At the end of the Waterloo mine's working life, there may be the opportunity to pull the poles out and re-use them at another site," Brendon Chambers said.

"That wouldn't really be practical with timber poles."

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