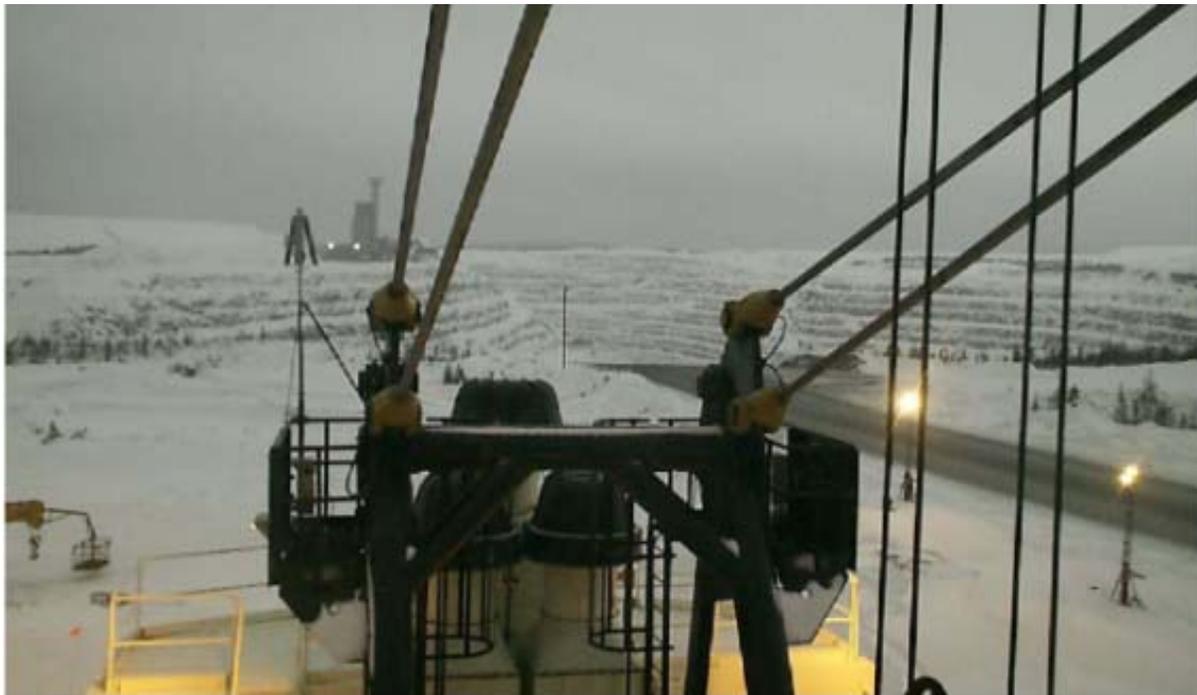


## Siemens Remote Access Solutions



Sweden, December 2000 ... somewhere north of the Arctic Circle. It's not exactly the most convenient place to be when your mining machine goes down, but that is exactly what happened at an iron mine in Gällivare, Sweden when the newest electric rope shovel of their fleet had its first hiccup.

Just two weeks after commissioning engineers left site, the machine was unable to be energized. The local maintenance team was still getting up to speed on the new machine, and after several hours of troubleshooting, they were unable to get to the root cause of the problem on their own. They needed expert advice.

They started the traditional approach for field support. The OEM was contacted. Local service personnel were dispatched. Factory experts were engaged for phone support. But, after all this time and effort ... the machine was still down, and they had no idea how to bring it back up. At this point, the traditional method of remote support had failed, and it was necessary to send a field service engineer to site. Unfortunately, getting someone from the US to Sweden, north of the Arctic Circle, takes over a day. Meanwhile, the machine would be sitting idle and unproductive.

At this time, the OEM contacted Siemens, and asked if we could connect to the machine using our new remote access system, SiRAS. The remote access system allows users to access the host computer on board the machine, and thereby have access to all of the engineering tools that they would have if they were actually on site. With Siemens as the drive supplier, we can also provide the expert service to not only read the status of the machine, but to also make adjustments, as necessary. This is something unique to an integrated remote access solution from the drive supplier.



The drive expert that actually designed the system connected to the machine from our secure remote response room. Upon inspection, it was determined that one of the DC link voltage transducers had experienced a failure. As a result, the value read in by the control system was slightly less than the actual DC link voltage value. The system has built in redundancy to detect such a fault. This protection prevented the drive system from being energized. Within minutes, the system designer was able to correctly diagnose the issue, and provide the corrective action instruction to resolve the problem. The solution was to swap out the transducer with one from the recommended spare parts kit.

But the story doesn't end there. It turns out the mine did not purchase the recommended spare parts kit. They had no spare voltage transducer. Again, getting one to them could take days. This would lead to more lost production.

However, due to tests performed remotely, the design engineer determined that the tolerance between the redundant sensors could be slightly adjusted so that the machine could be safely operated until the transducer could be replaced on the machine. Just like that, within minutes, the machine was back in operation.

Afterwards, Siemens called the OEM to give them the good news. It turns out we had solved the problem before the flight arrangements had been made for their service engineer to go to site.

Since that time, nearly every excavation drive system provided by Siemens has been sold with the integrated remote access solution. In cases like this one, in just one instance, the initial cost of the solution is paid for.

It's too important not to have.

For more information, please contact

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