nVent ERICO Provides Grounding and Bonding Solutions For Peak Gold Mine In Australia

CASE STUDY

Peak Gold Mine, in Cobar, New South Wales, Australia had been in operation between 1896 and 1920. Following the discovery of additional gold deeper in the Earth in the mid 2000s, operations recommenced - mining 99,072 oz of gold and 9,070 tonnes of copper in 2014 with mine life being extended to 2020.

In order to provide increased power for project operations when the mine re-opened, multiple surface substations were needed. When deciding on the earthing for these new substations, driving ground rods was deemed too impractical and expensive due to rocky ground conditions. As a result of the soil conditions in this area, installers drilled holes with cable electrodes and enclosed them in bentonite-type products.

Unfortunately, the severe drought that had been plaguing this part of Australia caused the bentonite products to crack away from the electrodes - allowing the electrodes to be pulled out by hand and rendering the system useless for grounding.

nVent ERICO Ground Enhancement Material (GEM) was then brought in to solve these tough grounding issues and resolved the problem of the grounding material cracking away from electrodes. GEM also reduced the number of electrodes required due to its low- resistance performance.

In addition to GEM, nVent ERICO Cadweld was used to solve various connection issues between the electrode cables and conductors.

Cadweld proved easy to use, reduced cost and installation time, and proved exceptionally successful in terms of earthing performance.

Commenting on nVent ERICO's products in the project, a former Senior Sales Engineer at the mine stated that "Cadweld is very cost effective in comparison to other connecting products and, when performance is taken into account over a substation's earth grid life cycle, it is miles ahead".

As a result, Peak Gold Mine experienced a significant reduction in cost in addition to the savings of using nVent ERICO's complimentary design services as opposed to an external consulting service. Peak Gold Mine continues to utilize nVent ERICO products for their earthing needs on substations, transformers, and earthing grids today.

To see how nVent ERICO can improve your grounding and bonding systems, visit nVent.com/ERICO to talk with a representative or engineer today.

GEM improves grounding effectiveness regardless of soil conditions and provides excellent permanent conductivity. GEM is ideal for areas with high resistance such as rocky ground, mountain tops, extremely dry environments and sandy soils. GEM typically lowers the resistance of the grounding system by 40%. It does not dissolve, decompose or leach out with time.

Cadweld uses aluminium to reduce a copper-oxide based material within a graphite mold to yield a permanent bond that will not loosen or corrode with a lifetime equal to that of the installation. The system joins copper to copper, copper to steel, copper to copper-clad steel, copper to bronze/brass/stainless steel and more.

Cadweld connections withstand repeated fault currents without failing and exceed the requirements of IEEE® Standard 837 – Standard for Qualifying Permanent Connections Used in Substation Grounding.

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER

©2018 nVent. All nVent marks and logos are owned or licensed by nVent Services GmbH or its affiliates. All other trademarks are the property of their respective owners.
nVent reserves the right to change specifications without notice. ERICO-WPCS-H84399-GEMCadweld-EN-1809