

A photograph of an industrial facility with numerous large, grey pipes running parallel to each other. The pipes are supported by metal brackets and run across a concrete floor. The background shows more pipes and some structural elements of the plant.

## Is it possible to make a profit during scheduled maintenance?

Perhaps one of the toughest decisions in managing any industrial plant is knowing when to shut down production in order to carry out scheduled maintenance – finding the balance between market demands and seasonality, lost revenue and increased expenses, stopping today to be better tomorrow... This is a challenge that has been successfully overcome at the Ribeira Grande Geothermal Power Plant in the Azores Islands, simply by carrying out maintenance, while keeping the plant in full production.

The island of Sao Miguel in the Azores is one of the world's leading territories in terms of the proportion of electricity needs covered by geothermal generation. In 2011, geothermal overtook oil as the leading energy source there, thus preventing the emission of over 160,000 tonnes of CO<sub>2</sub> per year and catering for more than 23% of the country's energy needs. This clean, renewable energy represents a key issue for the island, so it is very exciting and a privilege for Hempel to maintain close working relations with the local utility company EDA Renovaveis that works with the Sao Miguel geothermal plants, as well as their contractors Setilgest and Duopinta.

The Ribeira Grande has a 13MW capacity from four generator units that date back to the early 1990s. In 2015, Hempel's coatings were applied by Duopinta to renew the outer coating on 1,700m<sup>2</sup> of geofluid piping at the plant. Hempel has already participated in a number of maintenance projects and new builds, but nevertheless, we were especially proud to take part in what turned out to be a very novel way of applying our coatings.

As is standard practice on any pipe coating renewal, the first stage was to strip the piping of its old insulated cladding to gain access to the steel pipe, which was then abrasive blasted to grade SA2½. Once the surface was suitably clean, it was coated with two 150 micron coats of Hempel's Versiline 56990, our single component inorganic co-polymer coating designed specifically to protect against Corrosion Under Insulation (CUI), before being insulated with new metal cladding.

You may say there is nothing very special about this story so far, but what makes the Ribeira Grande project so interesting for all those in industrial protective coating work is that the client was not required to slow or halt production at any time in the process! The technical specification for Hempel Versiline 56990 states that it is designed for long-term protection of hot pipework, equipment and other hot surfaces and can be applied directly onto the steel substrate. In this case, that steel substrate was at a constant temperature of 140°C during both the blasting and coating stages.

The Ribeira Grande project is a magnificent example of how Hempel Versiline 56990 offers tremendous cost-saving benefits over conventional aluminium silicone coatings. Especially when the expense of scheduled maintenance



can easily be offset by keeping production in full swing. We would like to thank EDA Renovaveis and especially their manager, Eng. Carlos Bicudo, for their cooperation.

Naturally, Hempel experts are on hand to advise on how we can help you cut costs on maintenance.

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