

# The Gold Standard in Pipe Coatings



Over five miles of 54 inch diameter above ground seawater steel pipeline, lined and coated with Madison's polyurethane.

The Republic of Indonesia comprises more than 13,000 islands and a line of active and extinct volcanoes. The population of 200 million hosts over 300 ethnic and tribal groups with distinct cultures and 583 dialects. The archipelago is home to elephants, tigers, leopards and gold!

North America's largest gold mining company, Newmont Gold, in a joint venture with the Japanese Sumitomi Corporation, is currently constructing the Batu Hijau project on the Indonesian island of Sumbawa, just off the coast of Bali. This open cut operation is designed to extract gold, copper and silver for the next 20 years.

As part of the project, Fluor Daniel, an expert engineering firm in Irvine CA, designed an aboveground pipeline to transport inland huge amounts of seawater required for the mining process. Corrosion prevention was a critical design consideration for the pipeline, and Fluor Daniel specified Madison polyurethane systems for the internal lining and external coating of over five miles of 54 inch diameter steel pipe.

The pipe was manufactured by Northwest Pipe Company in Portland, Oregon and coated in their plant before being loaded on ships for the long journey to Indonesia. The lining consisted of 40 mils (almost twice the typical applied thickness) of Madison's Corropipe II UltraLiner to protect against the highly corrosive seawater and the abrasive effects of sand. Corropipe II UltraLiner is a fast-setting plural component polyurethane which allowed the applicator to achieve the required thickness in a single coat. The external coating was applied in two stages. First, Northwest applied a base coat of 25 mils of CorroClad 2000 - another of Madison's 100% solids fast-setting polyurethane coatings. Then, a topcoat of 5 mils of Madison's AcrylaThane was applied to protect the pipe from the intense equatorial sun. Apart from the throughput advantages to the applicator, polyurethane coatings offer excellent impact and abrasion resistance, and require very little repair once they arrive at the job site.

During the design process, Fluor Daniel was quick to address the on-site application parameters. The in-field joint coating had to be easy-to-use and of a quality equal to its shop-applied fast setting counterparts. This made Madison an even more compelling choice because its Corropipe 'S' could be applied like paint to both the internal and external surfaces of the pipeline.

Extra insurance was provided by Madison's Approved Applicator Program. Just to be on the safe side, Qatar Coating and Scaffolding Company, a Madison Approved Applicator, was brought in to assist PT Quantra Internusa with the on-site application of Corropipe 'S' to the pipe joints.

The Batu Hijau project is a recent example of how Madison's Corropipe polyurethane systems are quickly becoming the Gold Standard for coating and lining pipe.



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