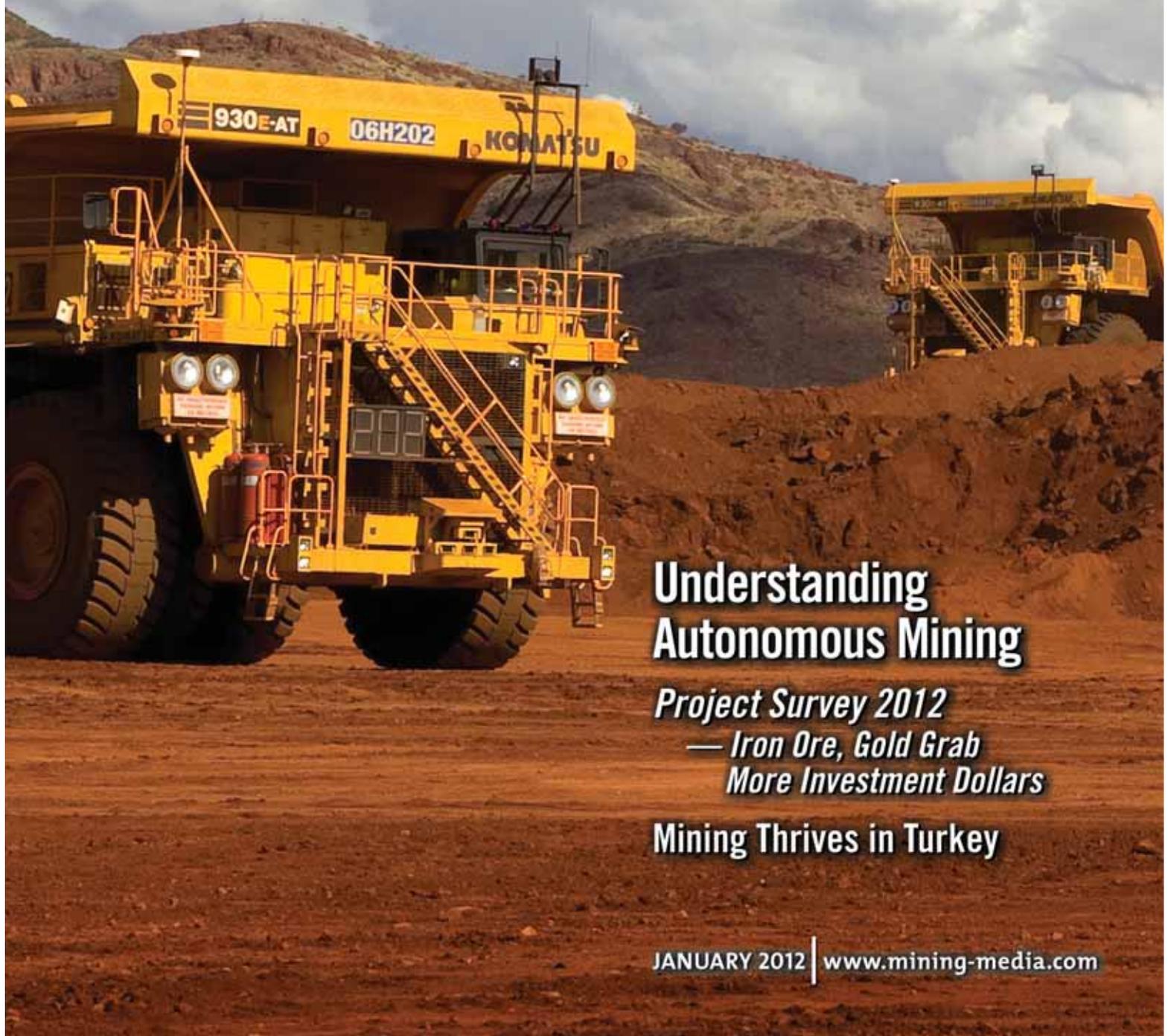


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# Industrial Coatings Provide Long-term Protection from Corrosion

The PT Newmont Nusa Tenggara mine in Indonesia has produced copper concentrate containing small quantities of gold since 2000. Based on the remote tropical island of Sumbawa in the Indian Ocean, saltwater-related corrosion of the surface mine's processing infrastructure and pipes has been a continuing problem. Salt-laden air and mist can cause protective coatings to fail and steel substrates to degrade prematurely.

To address the issue, in 2008 management implemented a project to remediate corrosion of the mine's overland conveyer system, pipelines and the mill house, including the roof. Newmont sought the services of a company that could deliver a turnkey solution to the refurbishment—from professional advice to degreasing, sandblasting and high-pressure washing, to coating the structures and offering project quality control, to ongoing maintenance services. In conjunction with Sherwin-Williams Protective & Marine Coatings, Newmont selected Singapore-based EJ Coatings Pte as the solution provider for this undertaking.

Through its subsidiary in Indonesia, PT. Surya Sembada Jaya, EJ Coatings pro-

vides a full range of engineering services to the mining industry on corrosion remediation projects, from site preparation through the final finishing coat. For the mining industry, Sherwin-Williams supplies protective coating systems designed to reduce the total cost of ownership of expensive and critical equipment and structures by warding off corrosive attack from typical mining operating conditions as well as addressing challenges presented by harsh environments.

The project scope included removal of salt and copper dust contamination, and coating the mill house and other equipment and structures. The coating system specified would require high-solids, high film-build products that adhere well in a harsh setting, provide significant abrasion and impact resistance, and deliver a long-term program of corrosion protection. For high visibility areas, a topcoat that provided color and gloss retention was also a necessity.

To achieve the best possible penetration into the steel substrates for impact and corrosion resistance in the aggressive operating environment, Sherwin-Williams recommended the following system:

- SeaGuard 5000 HS Epoxy—A high performance, low-VOC, high solids coating delivering superior bond strength in marine environments.
- Sher-Glass FF—An easy-to-apply glass flake-reinforced amine epoxy coating and lining system highlighted by its low permeability and durability, delivering enhanced chemical and abrasion resistance and edge retention.
- SherThane 2K Urethane—An aliphatic acrylic-modified polyurethane enamel providing chemical and abrasion resistance, as well as color and gloss retention, for high visibility areas.

As part of the start-up process, Sherwin-Williams conducted classroom training and field demonstrations of the coating system for the application team. Over the course of the project execution, Sherwin-Williams also supplied periodic on-site technical consulting to augment the quality control inspectors provided by EJ Coatings, providing daily assurance that work was being performed in full compliance with the specification.

Newmont reports that four years after application, the coatings are holding up well.



Prior to the start of a project at a Newmont copper operation in Indonesia to coat and protect the mine's processing infrastructure from corrosion, Sherwin-Williams Protective & Marine coatings trained the Singapore-based application contractor's crews in proper preparation of surfaces as well as in applying the selected industrial coatings. The coatings have stood up well to harsh local conditions since being applied more than four years ago, Newmont reports.

## Platinum Refiner Upgrades Equipment for Higher Productivity, Reliability

Pfautler Reactor Systems, a specialist in providing glass-lined process components and part of the Process Solutions Group of Robbins & Myers, was recently retained by a South Africa-based precious-metals refiner to upgrade mixers in an effort to significantly increase the capacity of the customer's process reactors.

Working in conjunction with sister company Chemineer, Pfautler developed what it describes as a process solution designed to ensure optimum mixing of platinum group metal concentrates, which can severely damage vessels when not configured correctly. Pfautler Process Engineer Chris Drysdale said: "As platinum group metals are very heavy, the tendency is to run mixers at excessive speeds in order to achieve sufficient solids suspension. This not only increases energy bills, but it causes the heavy metal concentrates to damage the glass interior of the tank, which can