

Alcan Gove

AVEVA NET supports huge alumina refinery project for Alcan Gove

The Alcan Gove bauxite mine and alumina refinery is located at Nhulunbuy on the Gove Peninsula in the East Arnhem Land region of Australia's Northern Territory. From this remote location Alcan Gove supplies alumina and bauxite for the international aluminium industry. It is regarded as one of the most cost-efficient producers in the highly competitive world alumina market. Alcan Gove is part of Alcan Inc., a multinational, market-driven company and a global leader in aluminium and flexible and speciality packaging. Alcan employs 65,000 people and has operating facilities in 60 countries and regions.



The Alcan Gove refinery at Nhulunbuy on the Gove Peninsula

Facing the Challenges

The Alcan Gove bauxite mine and alumina refinery, located at Nhulunbuy on the Gove Peninsula, supplies alumina and bauxite for the international aluminium industry. Alcan Gove is undergoing a major, AUD \$2 billion dollar, alumina refinery expansion. Known as 'G3', the expansion will increase alumina production capacity from 2 million to 3.8 million tonnes per annum by 2007.

All parties involved in the Alcan Gove expansion needed immediate access to the massive amount of design, engineering and project control data.

The Solution

To solve this problem, Alcan Gove implemented NET and VPRM. AVEVA was the only provider with the ability to deliver the project within aggressive timescales; in the case of VPRM, the deadline was just four weeks from initial contact to implementation.

VNET was implemented at Alcan Gove in September 2005. Via the Internet, AVEVA NET gives all project participants at the engineering office in Brisbane, at the site in Gove, and at the four manufacturing yards in Australia, Malaysia, Vietnam and Thailand, immediate access to all design and production data.



A PAM shipment with the Sea Baron

Modular construction delivers cost and time reductions

The extension of the Alcan Gove refinery uses the latest IT technologies to monitor the advanced design, engineering and manufacturing methods employed there. The new sections of the plant are designed and engineered in Brisbane. The 3D technology allows the engineering team to create accurate, three-dimensional models of each component of the expanded refinery. These designs are then forwarded to the fabrication yards in Darwin, Newcastle, Thailand, Vietnam and Malaysia where they are fabricated and assembled before being shipped to Gove.

The manufacturing of the pre-assembled modules (PAMs) takes place at four remote locations in Australia, Malaysia, Vietnam and Thailand. At the site in Gove, four different construction companies are responsible for the extension of the refinery. PAMs are major equipment components that are fabricated and fitted out off site, then shipped to Gove, ready for installation as complete modules. PAMs can weigh up to 1,700 tonnes. This manufacturing technique will ensure that work can be progressed without causing interruptions to the day-to-day operations at the Gove refinery.

Alcan Gove has also integrated VNET with their RF tagging application, enabling Alcan to control which item belongs to each specific PAM.

About AVEVA NET

AVEVA VNET is a unique, Internet-based technology that enables common applications to be integrated to create an Internet-based information portal. VNET allows customers to view and manipulate information throughout the lifecycle of an engineering project. In addition, it can be integrated with AVEVA and competitor products, as well as with other complementary applications such as SAP and Documentum. AVEVA is successfully delivering both the underlying VNET product and the associated integration services to clients worldwide.

About AVEVA VPRM

AVEVA VPRM is a comprehensive solution for the management and control of materials for EPC contractors, clients, vendors and subcontractors. VPRM can receive issued data directly from AVEVA's VPE P&ID, or from any third-party P&ID system, through an XML-based interface.



Loading operation of a PAM

Benefits

The entire task has relied on effective communication between the Brisbane-based engineers and the construction teams at the site in Gove and at the fabrication yards. All project participants in all locations have immediate access to the latest published versions of the documents and data via the Internet. For example, a complete 3D model of the plant, all relevant process diagrams, arrangement drawings and associated project control data are integrated and accessed through the VNET Engineering Portal.

In addition, VNET serves as the integrator of 3D models from a number of non-AVEVA design systems, as well as VPRM purchasing information, document management data, commissioning data and more.



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