Horizon Oil Sands Slurry Preparation Plant

Fort McMurray, Alberta

The continuing development of the massive Horizon Oil Sands facilities in Alberta, Canada (total investment will exceed $10 billion) required the construction of an Ore Preparation Plant (OPP). The "wet" side of this plant, known as a Slurry Preparation Plant (SPP), where oil sand ore is liquefied for further treatment, presents serious corrosion challenges to both the machinery and the building structure itself.

This project faced further challenges because Krupp engineers designed this plant to be re-locatable with an extra-long service life as demanded by Horizon. The stricter than normal structural steel requirements necessary to ensure proper fit of the many complex and enormous pieces of interconnected machinery tested all players involved in the project even further.

These challenges opened the door to hot-dip galvanizing which historically has not been widely used at oil extraction sites. Careful participation in the design of steel components for galvanizing was critical to ensure high-quality and cost effective coatings while maintaining safety in the hot-dip galvanizing plant.

The high-capacity, automated plant streamlined the process of delivering the beautifully galvanized product while a data capture system facilitated proper identification and full traceability of every component processed, which is especially critical at such remote jobsites.

This new state of the art OPP brings oil production costs to new lows for Alberta oil sands thanks to high-efficiency equipment design and much longer amortization due in part to the hot-dip galvanized steel extending the service life. This growing interest in more durable, longer lasting facilities in the Canadian oil sector is a great opportunity for the industry to offer the unparalleled value of hot-dip galvanizing to a huge new market!

Continuous improvements like those at Horizon Oil Sands are helping build cost-competitive North American energy independence, lessening our dependence on imports from unstable and dangerous regions of the world. Utilizing hot-dip galvanized steel in the infrastructure of new energy facilities will help North America maintain and expand our energy independence for decades to come. ■

Galvanizer
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