

Fibergrate

Composite Structures

Power



ALUMINUM SMELTER FACILITY POTROOM

Overview

There are two main phases to aluminum production; the bauxite is ground to extract the alumina and the alumina is then turned into aluminum by electrolytic reduction. Aluminerie Alouette's new Aluminum Smelter Facility uses the electrolyte technology that has the lowest impact on the environment. The production process is subdivided into three phases; anode manufacturing, electrolysis and the casting of sows and ingots. The electrolysis phase is where potrooms, consisting of two halls each 875m long, produce temperatures of 1,100°C.

Problem

The Aluminum Smelter Facility needed to use materials that were thermally and electrically non-conductive. The potrooms in the Aluminum Smelter Facility produced high temperatures and had nominal electric currents of 350kA at 1320VDC. We were required to supply over 40 units of non-conductive staircases, platforms and wall barriers in between the claustra wall to have access to the basement.

Solution

Fibergrate was able to offer the following benefits with its products:

- Non-conductive products protect workers against potential burn and electrocution hazards
- Corrosion resistant
- Lightweight
- Easy to install; no heavy equipment required for installation.
- Maintenance free
- Cost effective

Fibergrate worked in partnership with the engineering firm to design a structure that fulfilled the customer's requirements. FRP structural products were selected to build staircases, platforms and wall barriers. The barrier used 1" thick FRP molded grating for the walls and 1.5" thick FRP Corvex molded grating for the floor. Dynarail handrail and molded stair treads grating were also used. The structures were prefabricated and sent to the site where an on-site contractor, using our materials for the first time, installed them without any problems.



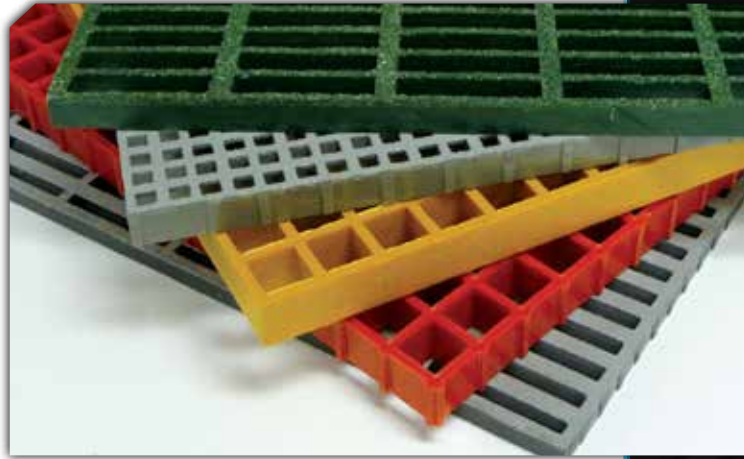
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[Company Overview]

Fibergrate Composite Structures Inc. is the leading manufacturer of fiberglass reinforced plastic (FRP) solutions for industrial and commercial use globally. Fibergrate sets the standard for high-performance composite products with such proven brands as Fibergrate® and Chemgrate® molded grating, Safe-T-Span® pultruded grating, Dynarail® handrail and ladder systems, and Dynaform® structural shapes.

As the originator of FRP molded grating, Fibergrate began manufacturing in 1966 in Dallas, Texas. Today, Fibergrate's ISO 9001-2008 certified manufacturing facilities in Stephenville, Texas, and Querétaro, Mexico, manufacture a full line of FRP products and structural systems using a variety of technologies.



In 2010, Fibergrate proudly relocated its Canadian fabrication facility to open a new state-of-the-art Design & Innovation Centre in Oshawa, Ontario, Canada. This facility combines dedicated Design Teams, a skilled Drafting Department, Project Managers, Experienced Fabricators and an extensive selection of inventory. Using industry leading equipment, Fibergrate has been able to develop custom designs & modeling technologies as well as provide in-house fabrication services under strict quality control guidelines. Fibergrate combines proven engineering skills with an unmatched knowledge of composite material solutions to consistently deliver the most cost effective results.

Let us put our nearly 50 years of experience, products, design and fabrication capabilities to work on your next project.

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Fibergrate is a wholly owned subsidiary of RPM International Incorporated. RPM International Inc., a holding company, owns subsidiaries that manufacture and market high-performance coatings, sealants and specialty chemicals, primarily for maintenance and improvement. Such proven industrial brands include Carboline, Tremco and Stonhard; consumer brands include Rust-Oleum, DAP and Zinsser.

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