

THE PROFILE NEWSLETTER

FALL
2008

SAFPLANK® Fiberglass Decking Clears the Way for Hong Kong Residents

The Drainage Services Department in Hong Kong, China has initiated a ten-year decking program, aimed at improving the living environment around residential buildings. Traditional drainage channels were not selected because the exposed channels lead to safety and odor emission problems.

Strongwell's fiberglass planking system, SAFPLANK®, was the best solution for the outdoor application. SAFPLANK® is designed to replace wood, aluminum or steel planks in environments where corrosion or rotting



creates costly maintenance problems or unsafe conditions. The problem solving fiberglass decking was provided and fabricated by Strongwell's international distributor, Bumatech.

The SAFPLANK® channel covers in the latest application were installed in the prestigious neighborhoods of Fung Fai Terrace, Happy Valley, Hong Kong.

SAFPLANK®'s unique interlocking system ensured a continuous and appealing solid surface, while providing an air-tight design for enhanced odor control. ●

Newsmaker: Online Design Tools

Design Tools Created to Support Strongwell Customers

Strongwell has several tools available for engineers and architects using Strongwell products. The design tools are now grouped under a new section of the Strongwell website labeled "Design Tools".

Strongwell's Design Manual is at the top of the list. The recently updated Design Manual now includes CAD block files of Strongwell products. Currently, EXTREN® and COMPOSOLITE® CAD libraries are available with the remaining Strongwell product lines to follow. In addition, updates to the manual are displayed on the manual's home page.

Strongwell Fabrication Worksheets are a new addition to the Strongwell website. The worksheets are online forms that provide a means to upload project descriptions and drawings required to receive accurate quotations from Strongwell. Other tools include Strongwell Specifications document, ideal for specifying Strongwell's FRP products, and the new SAFSTRIP® Design Software, which can be read about on page 4 of this newsletter. Strongwell even offers a Multi-Span Beam Analysis Program for purchase.

To access all of these tools, visit www.strongwell.com and click on "Design Tools". ●

Design Tools



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STRONGWELL

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Case Study: DURAGRID® & EXTREN®

California Winery Harvests the Benefits of Pultruded Fiberglass Catwalk

Strongwell's DURAGRID® custom fiberglass grating was vital to the recent renovation of a catwalk at the Lazaro Winery in Temecula Valley, California.

The previous galvanized steel grating had corroded severely and was preventing

safe access to winery's fermentation tanks. Strongwell customer, Irvin International Incorporated, was contracted to design and fabricate the new catwalk. Irvin International has vast experience in the catwalk industry including billboard fiberglass catwalks.

The new catwalk featured Strongwell's corrosion resistant DURAGRID® I-7000 1" pultruded fiberglass grating. Irvin International also used an EXTREN® 1" F-Track profile as kick plate.

The new catwalk was less expensive than stainless steel grating and assembled flawlessly with the existing support structure. Because the fiberglass components are lightweight, the catwalk system was



economical to ship and convenient to handle during installation. The fiberglass catwalk is also non-conductive and easy to maintain since the components will not require painting.

With such a cost efficient and attractive fiberglass solution, the Lazaro Winery is also considering replacing the vineyard's metal vine stakes with fiberglass. This application of Strongwell's pultruded fiberglass products promises to age as gracefully as the estate's fine wines! ●



Case Study: EXTREN®, SAFRAIL™ & DURADEK®

Hawaiian Research Facility Nets Corrosion Resistant Fiberglass Platform

Just over 100 yards away from the Pacific Ocean, the Oceanic Institute, OI, is developing new lines of shrimp breeding stock for the U.S. shrimp-farming industry. Being so close to the ocean is necessary for the Oahu, Hawaii based research institute, but presents major corrosion related drawbacks.

The OI needed safe access to monitor the 68' diameter tank; access that could withstand the salt-water environment. In addition, the structure had to support a shade cover used to regulate the tank's water temperature.

The institute relied upon the expertise of Plas-Tech Ltd. fiberglass fabricators to provide the breeding tank's platform. Plas-Tech selected Strongwell's fiberglass structural shapes and plate and pultruded fiberglass handrail as the best materials to construct the structure.

High-strength and corrosion resistant, EXTREN® square tube, angle and

plate comprise the platform foundation. Additionally, EXTREN® round tubes protect the shade covering from rubbing against stainless steel supporting wires.

The platform's walkway featured Strongwell's SAFRAIL™ industrial handrail and DURADEK® I-6000 high-strength fiberglass grating. Taking full advantage of the problem solving attributes of fiberglass, the platform's stair treads were also fabricated from DURADEK® grating.

Chan Rowe of Plas-Tech Ltd. commented that the project came in on time and within budget. He added, "The



[Oceanic Institute] project would not have been practical under the circumstances with a different product or fabricator. The primary experiment conducted was very successful and exceeded all expectations." ●

Case Study: EXTREN® DWB

Double Web Beam Supports Wastewater Enclosures

Michigan's City of Sandusky Wastewater Treatment Plant was in search of a high-strength and corrosion resistant material to support the facility's bio-reactor wheel enclosures.

Alro Plastics recommended Strongwell's 8" EXTREN® Double Web Beam with carbon and glass reinforcement. The carbon/glass hybrid beam has the capacity to carry the load over the extended span and the capability to withstand corrosive attacks from the wastewater environment.

The DWB's unique profile was designed by Strongwell using internal flange stiffeners. The strengthened double web beam shape significantly improved the lateral torsional stability of the beam. The increased stability reduces the beam's need for lateral bracing.



Thirty of the lightweight, double web beams were set into beam pockets in the concrete. The bottom flange of the beam was anchored to the concrete.

The bio-reactors are now running smoothly and without worry from corrosion. For more information on EXTREN® or other Strongwell solutions for the wastewater market, visit the Strongwell website. ●

Update: FIBERGLASS BAFFLES

Fiberglass Baffles Out-Perform Traditional Materials

In the summer of 2002, the Keegan's Bayou Wastewater Treatment Plant in Houston, Texas installed a new baffle system using Strongwell's pultruded fiberglass baffles and EXTREN® structural shapes. Strongwell's products were selected over traditional materials because fiberglass reinforced polymer shapes have extended product life cycles especially in highly corrosive, chlorine contact chambers.

With over six years of exposure, the Strongwell baffles have proven resistant to the chlorine-rich environment. Glass

Steel, Strongwell distributor and designer of the Keegan's Bayou Plant's baffle system, recently reported that the 6-year-old project was holding up very well. Glass Steel added that the fiberglass baffle system has had no problems or maintenance issues. Even as the 2008 hurricane season brought hurricane Ike tromping thru Houston, the baffle system stood up to expectations.



For more information about Strongwell's resilient fiberglass baffle panels, including a Baffle Panel flyer, visit the Strongwell website at www.strongwell.com. ●

New Product News:

Introducing DURAGRID® R-7300 1" Fiberglass Grating

Strongwell is excited to introduce the company's new grating – DURAGRID® 1" R-7300. This innovative fiberglass grating is specially designed to replace 1" steel grating in corrosive environments such as offshore drilling and production platforms, refineries and chemical plants.



The DURAGRID® R-7300 1" can span 36" with a load of 100 psf and a deflection of less than 1/4". The rectangular bar has a similar appearance to steel bar grating which is a benefit anytime a steel bar grating "look" is desirable. DURAGRID® R-7300 1" grating is half the weight of 1" steel grating and, therefore, easily handled in installation, and cost less to ship than steel grating. The bearing bar spacing of DURAGRID® R-7300 is 1-3/16" on center — the same spacing as standard steel grating. For more information, including load table data, visit the Strongwell website. ●

Newsmaker:

DURAGRATE® Grating Receives NSF Certification

Strongwell's DURAGRATE® premium polyester, non-fire retardant (NPP) and vinyl ester, non-fire retardant (NVE) molded grating has received NSF-61 approval in extreme temperatures. The NSF official listing certifies that the DURAGRATE® NPP and NVE gratings are both acceptable for use in potable drinking water. NSF testing concluded the submitted DURAGRATE® samples are able to withstand hot temperatures of 140°F and also cold temperatures.

DURAGRATE® is an ideal solution for water and wastewater treatment plants because the grating is strong, lightweight, corrosion resistant and can withstand extreme temperatures.

Other NSF approved products include EXTREN® Structural Shapes and Plates, COMPOSOLITE® Building Panels, SAFPLANK® Interlocking Decking System, Baffle Panels, and Flight Channels. ●

STRONGWELL People

Mike Carr - Regional Sales Director



Mike Carr has been promoted to Regional Sales Director for Strongwell's Region D. Mike has been with Strongwell for 10 years and formerly served as a Regional Sales Manager.

Mike's district is located in the southeastern United States. Region D includes Florida, Georgia, North and South Carolina. Mike's district responsibilities also include overseeing Region E - Tennessee, Kentucky, Mississippi and Alabama.

Jeff Roberts - Customer Account Specialist



Strongwell welcomes Jeff Roberts as a new Customer Account Specialist at Strongwell's Bristol Division. He will be responsible for handling customer inquiries and orders for all of Strongwell's product lines.

Jeff holds a Bachelor of Arts degree in Business Administration from King College of Bristol, Tennessee. He previously worked as Operations Administrator at Dominion Truss.

Newsmaker: SAFSTRIP® Design Guide Software

Free SAFSTRIP® Design Software Available On Strongwell's Website

Strongwell, in conjunction with the University of Miami's Civil, Architectural and Environmental Engineering Department, has published engineering design software for SAFSTRIP®. The SAFSTRIP® Design Guide software is provided as a service to structural engineers to determine if SAFSTRIP® is a product that can be used to economically rehabilitate deteriorated concrete structures.

Pultruded SAFSTRIP® strengthening strips attach to deteriorating concrete structures using mechanical fasteners rather than adhesives, also known as the Mechanically Fastened Fiber Reinforced Polymer (MF-FRP) process. SAFSTRIP® has been installed on concrete bridges in Alabama, Missouri, and Wisconsin. Alabama A&M University used SAFSTRIP® to repair two concrete bridges in northern Alabama.

To download your free copy of the design software, visit the www.strongwell.com and click on "Design Tools". A product brochure is also available on the Strongwell website. The brochure describes the product features, mechanical properties, and previous rehabilitation projects utilizing SAFSTRIP®. ●



The SAFSTRIP® Design Guide software is suitable for flexural analysis and design of simply supported reinforced concrete beams and one-way slabs strengthened with mechanically fastened FRP laminates subjected to uniformly distributed dead and live loads.

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