

# THE PROFILE

## NEWSLETTER

SUMMER  
2009

### Newsmaker: EXTREN®

## Fiberglass Selected to Replace Timber Screening Pyramids

The Vintage Club is one of America's most prestigious country club communities. Located at the base of Eisenhower Mountain in Indian Wells, California, the Vintage Club blends natural beauty with sophisticated architecture.

Throughout the club, pyramid shaped screens accent rooftops and conceal the facility's air-conditioning units. The dual-purpose screenings were constructed from structural timber and required approximately \$75,000 in maintenance costs, every other year.

The timber's quick deterioration, caused by the desert's thermal cycling, combined with the mounting maintenance costs were driving factors in the Vintage Club's exploration for a cost effective, long-term replacement. Harrington Plastics, a distributor of Strongwell products, recognized the club's situation as an ideal project for fiberglass. Harrington recommended Strongwell's EXTREN® structural shapes due to pultruded fiberglass' significant structural and architectural advantages over wood.

Unlike timber, EXTREN® does not rot or decay and EXTREN® is not susceptible to insect attack. Strongwell's EXTREN® shapes are also stronger and more rigid than timber.

Strongwell pultruded the fiberglass shapes in beige color to match the existing hue of the wood structures. Because pigments are added to the resin during the pultrusion process, the color is throughout the part, unlike timber which requires continual painting. Also, EXTREN®



▲ David Kendall, project manager from Lee & Sakahara Architects AIA, in Irvine, CA, opens an access door to an assembled fiberglass pyramid prior to installation.

◀ The wooden pyramids quickly deteriorated under the California sun.

shapes provide a clean, aesthetically pleasing appearance, complementing the Vintage Club's architectural theme.

Strongwell prefabricated 13 of the screening structures before shipping to the site for assembly. There, the lightweight structures were lifted into place using a single crane pick. This arrangement meant less install time at the country club, resulting in lower installation costs and little inconvenience to Vintage Club members.

Upon completion of the project, Tom Murphy, General Manager at the Vintage Club, reported that he was very pleased with the project. ●

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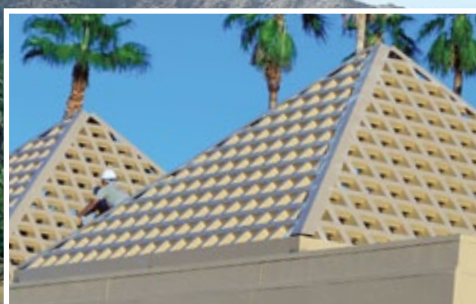
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## Case Study: DURADEK® & SAFRAIL™

### Fiberglass Grating & Handrail Safe Choice for Offshore Living Quarters Platform



PEMEX, Mexico's state-owned petroleum company, recently selected Strongwell's fiberglass grating and handrail for the company's new offshore living quarters platform, Cayo Arcas.

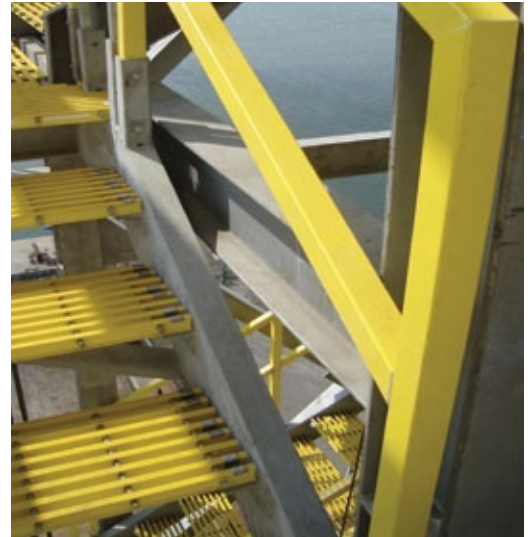
Major factors for PEMEX's selection of fiberglass involved safety, corrosion resistance, weight and difficulty of installation.

Strongwell's two inch, square, SAFRAIL™ industrial handrail and DURADEK® fiberglass grating were the

products of choice. SAFRAIL™ and DURADEK® are ideal replacements for steel or aluminum in corrosive environments or anywhere frequent grating and handrail maintenance costs are unacceptable. SAFRAIL™ handrail is standard in safety yellow, while the DURADEK® grating was painted to match. DURADEK® I-6000 was installed in the stairwells, while DURADEK® I-4000 covered the perimeter walkways. Both gratings were one and one half inch deep.

Both SAFRAIL™ and DURADEK® are pultruded with fire-retardant polyester resin and are low in thermal and electrical conductivity, key factors when considering the products were installed on the living quarter decks.

Each fiberglass product exhibits unequalled corrosion resistance in conditions like that found in the offshore, salt-water environment. The fiberglass handrail and grating is also very light in weight. Strongwell's Mexico distributor, Moix International, was able to fabricate and install the fiberglass products on time. In addition, SAFRAIL™ and DURADEK® provide savings on labor and maintenance, resulting in long-term savings and the elimination of cost and inconvenience of downtime for repairs. ●



## Case Study: SAFRAIL™, DURAGRID® & EXTREN®

### Ammonium Sulfate No Match for Fiberglass Platform and Stairs

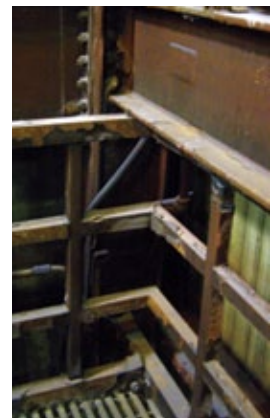


Indelco Plastics Corporation, a Strongwell product distributor, is an expert in fiberglass products. The company recently came to the aid of a customer who was plagued by corrosion. The customer's problem stemmed from the abundance of ammonium sulfate generated as a byproduct. The ammonium sulfate had aggressively corroded a metal staircase beyond the point of repair.

Knowing that Strongwell's products are resistant to ammonium sulfate, Indelco recommended EXTREN® structural shapes to replace the staircase supporting members and SAFRAIL™ industrial handrail with DURADEK® fiberglass grating to serve as the walkway and stairs. The fiberglass replacement provides a lasting solution,

satisfying the customer's needs with a corrosion resistant answer.

To learn more about the broad range of chemical resistance demonstrated by Strongwell's pultruded fiberglass products, visit Strongwell.com and read Strongwell's Corrosion Resistance Guide. ●



▲ Ammonium sulfate aggressively attacked the metal stairwell.

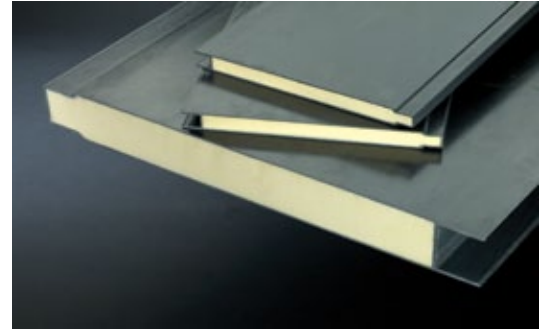
## Case Study: DURASHIELD® & EXTREN®

### Lightweight Fiberglass Shelters Installed at Indiana Power Facility

Fortune 500 company, Duke Energy is one of one of the largest electric power companies in the United States. The company generates electricity in locations ranging from the Midwest to the Carolinas.

The company needed to construct new monitoring shelters to track flue gas emissions produced at the Gallagher

Generating Station in New Albany, Indiana. The new buildings had to be lightweight to be assembled on top of existing structures. Strongwell's DURASHIELD® Foam Core Building Panels and EXTREN® fiberglass structural shapes were the selected materials used to construct the shelters.



DURASHIELD® is Strongwell's tongue-and-groove fiberglass pultruded panel comprised of a pultruded skin over a foam core. DURASHIELD® panels are designed to be used as walls, roofs and covers.

DURASHIELD® is transparent to electromagnetic emissions, low in conductivity and flame retardant, making the building panels a favorable

choice when fabricating enclosures containing electrical equipment.

EXTREN®, Strongwell's propriety line of fiberglass structural shapes and plate, provided the structural support, corner connections and door framing.

EXTREN® is available in more than 100 standard shapes and is also lightweight and super strong.

A total of five fiberglass shelters were constructed for Duke Energy. For more information on fiberglass structures, visit [Strongwell.com](http://Strongwell.com). ●

## Case Study: SAFRAIL™

### After 7 Years, First Installation of Round SAFRAIL™ Continues to Resist Corrosion

In 2002, Fort Lauderdale, Florida received the very first installation of Strongwell's round SAFRAIL™ industrial handrail system. The SAFRAIL™ was added to a fender system located below the city's 17th Street Bridge. A strong, corrosion resistant handrail system was required for workers' safety while inspecting the fenders.

Around SAFRAIL™ fiberglass handrail system is ideal for any high traffic area where handrail is needed. The round rails

are easy to grip and 90° molded corners eliminate sharp edges. The handrail system meets OSHA strength requirements with a 2:1 factor of safety with five foot maximum post spacing.



In addition to strength and safety precautions, SAFRAIL™ fiberglass handrail was selected because of the product's excellent resistance to salt water. After seven years of exposure to the Florida sun and the Atlantic Ocean, the

photos shown here, taken in January of 2009, demonstrate the durability of the fiberglass system.

Barnes Industrial Plastic Piping, Inc, Strongwell distributor on the project, reports the customer was pleased with the fiberglass application and all requirements of the handrail were and continue to be met with satisfaction. ●

## Case Study: SAFPLANK®, SAFPLATE® and EXTREN® Leri Footbridge Built with Strongwell's Lightweight, Corrosion Resistant FRP

Strongwell distributor and fabricator Pipex Structural Composites selected EXTREN® structural shapes, SAFPLATE® gridded plate and SAFPLANK® interlocking decking system for use in a 260 foot (80M) pedestrian footbridge over the River Leri in Wales, United Kingdom.

Pipex supplied and fabricated the footbridge for Network Rail. The footbridge provides a safe means to cross the River Leri alongside an existing railway crossing.



The use of Strongwell's lightweight fiberglass components afforded Pipex the ability to fabricate the bridge in sections. Eleven sections of the footbridge were assembled and load tested at the Pipex fabrication facility in Plymouth, U.K., over an 18 week period.

The largest section was 40 foot (12M) long and weighed 6,000 lbs. (2800kg), facilitating installation by roadtrailer from the adjacent railway.

Connected to the existing railway's wooden trestles, EXTREN® shapes were selected to construct the main structure and handrail of the bridge, while SAFPLANK® decking covered



with gridded SAFPLATE® formed the walkway's slip-resistant surface. The corrosion resistant FRP components were a smart choice for use near the moisture rich environment. Strongwell's fiberglass products have a proven track record for being resistant to corrosion in fresh and salt-water environments. To learn more about SAFPLANK®, SAFPLATE® and EXTREN®, visit the Strongwell website at [www.strongwell.com](http://www.strongwell.com). ●

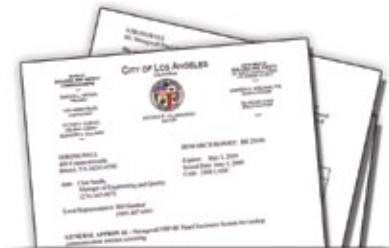
## Newsmaker: L.A.R.R. Approval Strongwell's Products LARR Approval Renewed

After four years of intensive reporting and testing, Strongwell's fiberglass structural materials achieved Los Angeles Research Report, L.A.R.R., approval for Radio Frequency, RF, transparent screening and enclosure systems.

Strongwell's LARR approval is the most comprehensive in the composites industry, encompassing EXTREN® structural shapes and plate, DURASHIELD® building panels, SAFPLANK® planking panels and FIBREBOLT® studs and nuts used in structures requiring RF transparency for rooftop structures.

In order to achieve LARR approval, Strongwell's materials were exposed to exceedingly difficult 3rd party tests, against a very stringent list of mechanical, fire, UV and weathering ASTM standards. The approved products were tested in the lab in accordance with ASTM protocols and also underwent full scale mock-up testing.

This testing and approval provides engineers with the confidence that Strongwell's materials are ideal for various architectural and structural applications. Many municipal building departments will accept this approval because Los



Angeles is considered one of the more difficult zones to obtain construction and building permits.

The safety factors of Strongwell's LARR approval allows the fiberglass structure to be utilized in many more applications than rooftop screening. Architectural facades, trellis, skyscraper treatments, even bus-stops are other applications where Strongwell's lightweight fiberglass structural materials are currently installed. ●

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