

STRONGWELL®

APPLICATION PROFILE



FIBERGLASS EASES TRADITIONAL METAL HANDRAIL CHALLENGES

Pacific Gas and Electric Company (PG&E), the largest private owner of hydroelectric facilities in the United States, is a utility company which provides natural gas and electricity to most of the northern two-thirds of California. PG&E wanted to improve worker safety and cut maintenance costs by replacing corroded steel access handrails at Kerckhoff 1, one of its remotely located power houses. Strongwell distributor, San Diego Plastics, utilized TTR Substations, Inc., to assist PG&E with their design and installation of the SAFRAIL™ fiberglass handrail. More than 1,500 lineal feet of fiberglass handrail was installed on five different levels of severely uneven and steep terrain with as much as a 45% grade.

This installation was a major achievement in illustrating how versatile composite products can be within the construction industry regarding on-site fabrication, electrical conductivity concerns and the challenging environment of installations in remote locations and difficult terrain.

An alternate post design for the SAFRAIL™ fiberglass handrail system dramatically reduced the installation time normally required. The 2-3/4" handrail pre-routed posts were field fitted and installed on-site by TTR with 2" x 2" top/mid-rails, kick plates, 90 degree connectors, rivets, split tubes, and adjustable connectors to ensure a perfect fit and finish.

In the areas where separation between the walkways from the transformers was required, a barrier fence was installed. For this, STRONGRAIL® fiberglass railing was installed with its 4" x 4" square post and attached base plate joined vertically to a panel of I-6000 1" DURADEK® grating.

The inherent non-conductivity of fiberglass eliminates the possibility of touch potential and therefore makes it safer to work around electrical stations with no grounding requirements. This product will improve aesthetic and safety values, virtually eliminate maintenance and easily double its metal counterpart's life expectancy. ●

TECHNICAL DATA

Product:	Fiberglass Handrail
Process:	Pultrusion
Materials:	SAFRAIL™ handrail STRONGRAIL® DURADEK® I-6000 1" grating
Sizes:	2-3/8" posts, 2" x 2" top/mid-rails, 4" x 4" posts
For:	San Diego Plastics / TTR Substations, Inc.
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