

# STRONGWELL

## APPLICATION PROFILE



### FIBERGLASS STRUCTURES TOUGH AGAINST CORROSION IN WASTEWATER PLANT

The wastewater treatment plant at the Marine Corps Air Station in Kaneheo Bay, Hawaii, treats 2 million gallons per day of domestic and non-domestic effluent in an attractive model facility. Eventually, clean effluent from the plant is pumped into the ocean or used to water grass at nearby recreation parks. The Marine Corps takes great pride in the efficient operation and aesthetic appeal of the plant.

In 1988 the wastewater treatment facility had severe corrosion, especially in its chlorine facility. Platforms, handrails, walkways and stairways of aluminum and steel throughout the plant were disintegrating at an alarming rate. Not only did plant management urgently need to replace failing aluminum and steel structures, but new structures required a consistent design appearance with handrails and platforms not being replaced. The solution came from Honolulu City and County engineers who were aware of the outstanding service rendered by fiberglass systems (using EXTREN®) at the naval wastewater station on the same island.

Strongwell provided two prefabricated fiberglass platforms 12' wide x 80' long, ten stairway systems, and 770 lineal feet of handrail walkway systems for the project. Using EXTREN® structural shapes and DURADEK® fiberglass grating, large sections of the structures were prefabricated and shipped to the site for final fabrication and installation.

Bodell/Wheelwright Company completed the on-site fabrication with no operational problems. According to a spokesperson for the Marine Corps wastewater treatment facility, "The fiberglass materials look unaffected by the chlorine environment throughout the plant. We expect long service from the fiberglass."

### TECHNICAL DATA

Product:	Fiberglass Handrail/Walkway Systems, Stairs, Platforms
Process:	Pultrusion/Fiberglass Fabrication
Materials:	EXTREN® Series 525 fiberglass reinforced polyester, fire retardant DURADEK® I-6000 1-1/2" fiberglass reinforced polyester grating and stair treads, fire retardant
Sizes:	770 lineal feet of handrail: 2" x 1/4" EXTREN® Round tube 4" x 1/2" x 3/16" Kick plate Two Platforms 12' x 80' each: 6" x 1-5/8" x 1/4" EXTREN® Channel 8" x 2-3/16" x 3/8" EXTREN® Channel 8" x 8" x 3/8" EXTREN® Wide flange beams Multiple Stairways: 8" x 2-3/16" x 1/4" EXTREN® Channel 10" x 2-3/4" x 1/2" EXTREN® Channel 5-1/2" x 1/4" EXTREN® F-section
For:	Bodell Wheelwright
User:	U.S. Marine Corps

#### STRONGWELL



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## APPLICATION PROFILE **532**

### STRUCTURES IN HAWAIIAN WASTEWATER TREATMENT PLANT