

# STRONGWELL

## APPLICATION PROFILE

### PHENOLIC GRATING PROVIDES LIGHTWEIGHT DECKING OFFSHORE

DURAGRID® phenolic grating, developed by Strongwell, provides the weight savings necessary for floating tension leg platforms, as well as fire resistant safety with low smoke and low toxic fume emissions. More than 80,000 square feet of phenolic grating has been fabricated for primary modules on the Shell Mars tension leg platform in the Gulf of Mexico, and another 75,000 square feet was used on the nearly identical Ram Powell platform.

Innovative technologies are required to meet the challenges of the offshore oil industry's move to develop record deep oil production. In this environment, weight savings is the key design feature since the more weight that can be taken out of the structure, the more weight that can be optimized for drill pipe, riser and production equipment. Compared to steel grating at 10-11 lb/ft<sup>2</sup>, the phenolic DURAGRID® grating weighs 3.5 lb/ft<sup>2</sup>. Phenolic grating, which is pultruded using fiberglass reinforced phenolic resin, offers the following additional properties: high fire resistance, low emissions, thermal low conductivity, high strength and impact resistance. Noncorrosive and virtually maintenance-free, phenolic grating also eliminates the continual repainting and rust removal maintenance required with steel.

The Mars platform, which is located in 2,940 feet of water in the Gulf of Mexico, is an enormous floating oil and gas production platform. With a 245' x 245' perimeter, it is designed to house 106 people, stands 3,250 feet high from the sea floor to the top of its drilling rig and weighs 36,500 tons.

"This is just the beginning of what may be an international move towards more offshore platform construction for deep water drilling," says Dave Schellhammer, National Sales Manager for Strongwell-Chatfield Division. "We estimate that the use of



advanced composites on the decks of the new generation of tension leg platforms could save up to 25% of the construction cost of the deck."

### TECHNICAL DATA

Product:	Offshore Platform Decking
Process:	Pultrusion
Materials:	DURAGRID® fiberglass reinforced custom phenolic resin
Sizes:	DURAGRID® I-6000 1-1/2" phenolic grating
For:	Shell Offshore & BP Exploration
User:	Mars Tension Leg Platform



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