

# ***Metal***

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# ***Architecture***

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## Regal Marine Project Exemplifies Cold-Rolled Forming Capabilities

Regal Marine Industries chose a pre-engineered building system for its ultra-modern, 188,000 sq. ft. boat manufacturing facility in Smithville, TN. The structure is not only near the theoretical size limit for its construction type, but incorporates loadings for a variety of special materials handling and manufacturing equipment.

Regal selected the system, by American Buildings Co., Eufaula, AL, on the basis of economy compared with alternate construction types and its ability to achieve a modern look compatible with the products the plant produces. The new facility manufactures complete lines of fiberglass cruisers and runabouts.

The building measures 538' x 320' feet, with an eave height of 24' and a 1:12 roof slope. Its exterior walls combine masonry and Dryvit trim with metal panels. Roof and walls are insulated with vinyl blanket insulation to U-factors of .052 and .040 respectively.

Special equipment in the building includes a floor track system for the movement of boat hull and deck molds, and overhead monorail and bridge crane systems for manufacturing processes. There is a concrete water test tank for boat testing, and underfloor tracks for utilities and process piping. The new facility has given Regal better workflow and lower maintenance costs, according to the company.

The building is near the size maxi-

mum for structures using cold-rolled steel, according to architect William Co. Maffett, of Architects & Engineers Inc., Cookeville, TN. Column bay spacing is an average of 40 x 80 on centers. Some columns were omitted and jack beams installed to provide for special boat handling requirements. Because of its fiberglass manufacturing operations, the building also had to meet special fire code requirements.

Maffett commented that "for certain space and span requirements, pre-engineered buildings are the most economical solution available."

Construction of the \$4.5 million project began in July 1988 and was completed in January 1989. Use of a construction management approach saved about 20% in on-site time. The general contractor for the facility was Maffett Construction Management of Cookeville.

