

Composite Resin: The New, Cost-Effective Alternative in Utility Poles

by Milena Radakovic

Utility poles, which help light the continent and provide voice services, are a key component of the electrical grid's infrastructure. Recent developments in advanced materials technology have created significant breakthroughs allowing for vastly improved designs and offering numerous benefits for today's utility companies.

RS Technologies, the operating division of Resin Systems Inc., a developer of composite materials, has created a next-generation utility pole: the RStandard™ modular composite utility pole for the transmission and distribution industry. Made from its

proprietary Version™ resin and a sophisticated filament winding process, these poles provide superior performance characteristics and are a highly cost-effective solution compared to traditional wood, concrete, or steel utility poles. Here are some of its features and reasons why the RStandard will save you money:

STRONGER

External factors such as climate changes, ultraviolet light, and insect/animal infestation can severely limit the lifespan of traditional steel, wood, and concrete poles. Other

factors, including salt air and rust, can corrode or compromise a pole's integrity, shortening its lifespan and making replacement a necessity. However, the material composition of the newer composite poles eliminates all of these wear factors. By being unattractive to insects, birds, and animals, it even eliminates damage caused by scratching, pecking, boring, and other destructive behavior. As a result, the RStandard pole can last up to 80 years, which is nearly 200 percent more than the maximum lifespan of a traditional utility pole.

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RSTANDARD™

UTILITY PRODUCTS

RStandard™ Modular Composite Utility Structures

– your maintenance-free solution for up to 80 years.

RS Technologies manufactures a line of innovative modular composite poles and H-frame structures for the T & D industry.

Advanced features include:

- lowest overall weight;
- highest strength-to-weight ratio
- reduced transportation and storage costs;
- impervious to damage from corrosion, water, salts, insects, animals and pole rot;
- enhanced UV protection; and
- non-conductive.

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Engineering & Operations Continued

LIGHTER

Just how light is this pole? First, less fibre is required to make the RStandard poles with equal or better strength than competitive solutions. Less fibre means that less resin is required to bond the fibres together. The final result is a reduction in pole weight of up to 45 percent, depending on the final height. Second, the pole's uniform diameter also reduces the pole's overall weight. Third, its modular construction allows RS to minimize the amount of excess resin and fibre in a finished pole by producing longer poles in interlocking sections. This interlocking design ensures that the poles can either be assembled prior to airlifting for ease of installation or stacked during installation using simple

lifting apparatus rather than the heavy-duty cranes required to install heavier poles. Damaged sections can be replaced individually without the need for grounding or detachment of lines.

The combination of the Version resin, the company's proprietary filament-winding manufacturing process, and its modular design make the RStandard lighter than any traditional utility poles available today. As a result, its overall design offers significant cost savings for storage, transportation, installation, and maintenance.

GREENER

In addition to strength, weight, and cost efficiency, RStandard poles have many noteworthy environmental

advantages. Almost all all-wooden poles currently in use today require chemical treatment with poisonous or carcinogenic substances in order to prevent corrosion. For example, Penta, the most popular treatment, has been classified as a persistent organic pollutant and has been banned in 26 countries. RStandard poles, by comparison, do not need to be coated with Penta, arsenic, or creosote. Likewise, the manufacturing process of Version resin, which is used in each RStandard pole, does not produce any volatile organic compounds (VOCs) or hazardous airborne pollutants (HAPs). It is non-toxic, thus eliminating emissions concerns in both the workplace and product installation sites. As a result, these poles are the most environmentally friendly ones available in the marketplace.

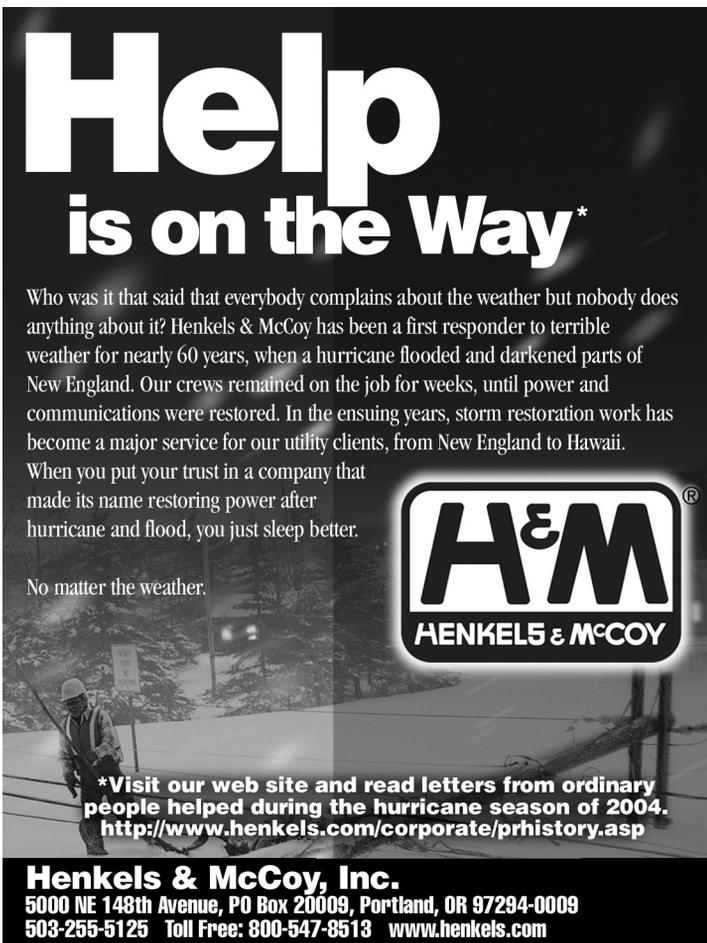
BETTER

Worker safety is of utmost importance to utility companies and the new composite poles provide two important benefits. First, since the poles are significantly lighter (either in sections or fully assembled) there is less chance of injury during installation or repair. Second, the composite resin material used to make RStandard poles is non-conductive; therefore, there is little risk of electrocution during installation or repairs of a live grid.

Replacing traditional utility poles with next-generation composite poles can result in substantial long-term savings for utility companies as well as provide considerable environmental and worker safety advantages — all at a cost savings that will last throughout the remainder of the 21st century.

NWPPA

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