



CASE STUDY



FireStrong™ Self-Monitoring Composite Pole Systems

The Creative Composites Group's Fiber-reinforced polymer (FRP) fire-resistant utility poles can be used to protect the grid from the excessive heat generated by typical brush/grass fires. FireStrong™ utility poles maintain their structural integrity after a fire, so they can be kept in service. In addition, the integration of an irreversible temperature monitoring system helps utility workers determine whether pole strength retention was successful.

Utility poles are engineered to last up to 75 years in some of the harshest environments with little to no maintenance. Adding fire-resistant poles further increases their durability and longevity in fire-prone areas. As a result, poles will be less susceptible to damage and degradation caused by the heat from a fire. A third-party testing agency tested the poles by simulating a chaparral wildfire. Our FireStrong™ poles withstood three minutes at 2,100°C and retained 100% of their design strength.

FireStrong™ poles include an irreversible temperature monitoring system that is placed around the pole. The system is engineered to continuously monitor the temperature experienced by the pole and permanently record the highest temperature measured on its surface. During post-fire inspections, utility workers can compare this measurement to a temperature vs. strength retention chart for the particular type of FRP pole, to evaluate whether the utility pole has to be replaced. This step helps shorten the amount of time required for inspections without sacrificing the quality of the results.

The key benefits of non-combustible FireStrong™ poles are ignition prevention, increased grid resiliency and cost savings. A grid protected by FireStrong™ power poles will be less likely to experience a failure due to fire. As a result, they will not need to be removed and replaced, meaning utility companies will not need to invest time and money into performing these operations, and end customers will not need to suffer through grid downtime.

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