

## LABORATORY TESTING

Inspiring Innovation • Confirming Quality



## INNOVATION

Thomas Peterson, the founder of Preformed Line Products (PLP), believed in innovation and quality. That's why product testing has been an integral part of PLP since its beginning in 1947.

In fact, not only do we test products during the development stage in our research laboratory at PLP's World Headquarters, we also test products at all our manufacturing facilities, to ensure our quality is never compromised.

Quality begins at the receipt of materials when an incoming inspection is performed, including wire analysis. This step ensures that PLP products start with high quality materials, supplied from certified, pre-approved vendors.

Today, our lab is one of the largest test facilities of conductor and cable accessories for the power utilities industry as well as fiber connectivity devices for the communications industry. While many competitors have reduced or eliminated their test labs, we recently expanded ours 50%, to 23,000 square feet.

PLP continues to be a leader in testing products to ensure they meet IEEE, CIGRE, IEC, ANSI, ASTM, Telcordia® and other industry standards — and meet or exceed our customers' expectations.

**A registered ISO 9001 Company**

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## ABOUT PREFORMED LINE PRODUCTS

Preformed Line Products (PLP) has been providing innovative products and services for communications and power utility networks since 1947. The company designs, manufactures and distributes high-quality cable anchoring and control hardware and systems, fiber-optic and copper splice closures, and high-speed cross-connect devices. With subsidiaries in Argentina, Australia, Brazil, Canada, China, France, Great Britain, Indonesia, Malaysia, Mexico, New Zealand, Poland, Russia, South Africa, Spain and Thailand, PLP supplies markets in more than 100 countries.

[www.preformed.com](http://www.preformed.com)



## IN OUR WORLD-CLASS TEST LAB

We design our products to last decades in the field, withstanding mechanical load, vibration fatigue, thermal and electrical stresses, ultraviolet exposure and corrosion. Our world-class test facility ensures we provide the most innovative products that customers can rely on long-term. We do it with:

### Tensile Testing



The mainstay of PLP's lab, our vertical and horizontal tensile (tension) machines test how cables and cable fittings respond when pulled. Our machines provide loads up to 450,000 pounds (204.12 metric tons) on cable lengths up to 100 feet (30.48 meters). Tensile testing measures the strength of products as well as how much they will stretch.

### Vibration Testing



PLP's vibration test lab is one of the most extensive in the world. Six machines simulate aeolian, galloping and other oscillatory conditions on cable fittings and cables up to 190 feet (57.9 meters) with cable tension up to 30,000 pounds (13.61 metric tons). We also can measure energy dissipation of products such as conductor dampers.

### Fiber Optic Testing



Along with mechanical test equipment, PLP's optical splicing and test apparatus evaluates power loss in optical ground wire (OPGW) and all-dielectric self-supporting (ADSS) cable and systems.

### Environmental Testing



Temperature Testing



High Voltage Testing



UV Testing

We ensure we can test products' resilience to environmental hazards in four test chambers that simulate:

- Temperature extremes, from -80°F (-62°C) to 300°F (149°C), under controlled humidity
- High voltage (up to 35kV) with optional wet/dry cycling
- Ultraviolet rays
- Salt fog/salt spray



Salt & Fog Testing



## PIONEERING LAB TESTS

A technical leader, PLP has pioneered lab tests that have become industry standards.

For example, in the 1980s, the power utility and communication industries had yet to determine test protocols for a new innovation, optical ground wire (OPGW) cable. With decades of field and laboratory expertise, PLP developed testing and defined standards. Later, IEEE adopted these test protocols for OPGW as an industry standard.

The same was true for all-dielectric self-supporting (ADSS) cable.

As today's manufacturers try new materials for high-temperature conductors, PLP continues to originate the best methods to verify and validate new product designs.

For more information about the lab at Preformed Line Products, to schedule a tour or to witness testing of your products, contact a PLP marketing and sales representative or the Manager of Corporate Tech Support/Lab Operations.

#### Americas

##### PLP U.S.A.

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PLP OFFERS A WIDE ARRAY OF PRODUCT SOLUTIONS. WE KNOW WHAT IT TAKES TO PROVIDE THE RIGHT SOLUTIONS WITHIN THE VARIED GEOGRAPHY OF ENERGY AND COMMUNICATION INFRASTRUCTURES AROUND THE WORLD.



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