



**Fast Facts**

**Company:**

Bridgestone tire manufacturing plant in South Carolina.

**Challenge:**

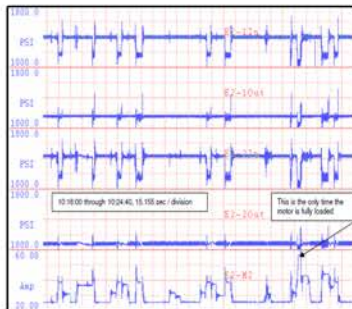
Bridgestone's tire curing presses used energy intensive hydraulic systems.

**Solution:**

RECON used data-collection technology to find inefficiencies in energy use.

**Results:**

Bridgestone saw a system power reduction of 50% and energy savings of nearly \$1,000,000 per year.



**Audit and Redesign of Tire Press Saves Nearly \$1 Million**

**COMPANY**

Bridgestone's tire manufacturing plant near Aiken S.C. produces radial passenger tires and light truck tires in a state-of-the-art facility that is LEED certified for its energy efficiency. Located in Graniteville, the plant was among the first nationally to win this certification, and is a charter member of South Carolina's Environmental Excellence Program.

**CHALLENGE**

Molding presses are a main ingredient in tire manufacturing, giving tires their final shape and tread patterns. Hot molds, similar to giant waffle irons, shape and vulcanize tires to add strength, elasticity and durability. Molds are engraved with tread patterns and sidewall markings required by law. Bridgestone's tire curing presses used energy intensive hydraulic systems to actuate the molds and operate other associated components.

**SOLUTION**

Bridgestone brought in engineers from Livingston & Haven's RECON Group to audit the company's energy use and evaluate the efficiency of their tire molding presses. RECON used new data-collection technology to measure energy usage, machine duty cycles and load requirements. An analysis of the data helped RECON find inefficiencies in the power units that drive the presses and resulted in a moderate redesign – eliminating the need for nearly half of the units' pump/motor groups.

**RESULTS**

- ◆ Total Resource & Energy Savings: \$958,893 per year
- ◆ System Power: 50% reduction
- ◆ Throughput Capacity: 5% increase
- ◆ Electricity Energy Savings: 12,372,657 kWh per year
- ◆ Carbon Reduction: 7,279 metric tons per year
- ◆ Power Factor Improvement: 20% increase
- ◆ Payback: Less than 1 ½ years

**About RECON**

A division of Charlotte-based Livingston & Haven, the RECON Group is a total solutions provider of energy efficient power delivery systems and retrofits. The group evaluates the energy and efficiency of manufacturing systems and machines, and develops custom engineering solutions to improve efficiency. RECON uses new technologies to capture data that allows for unparalleled analysis and smart solutions.