

MTI PROFILE

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The Flame Treating & Engineering Co.

All About Localized Heat Treating

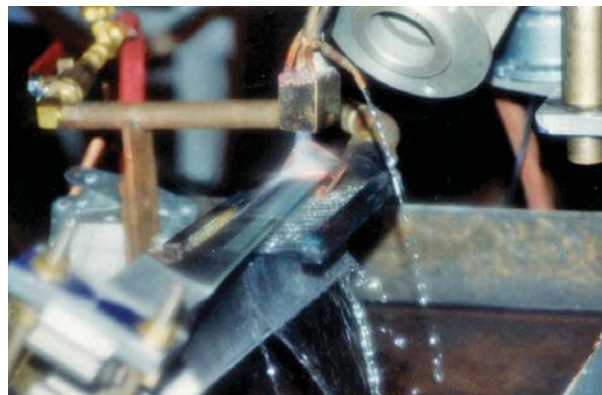
Two men and a barn – incredibly, that is just how The Flame Treating & Engineering Co. (FTECO) got started.

Leo Benoit and Tom Pitt founded the business in 1940 in Hartford, Conn. The company's first building was an old horse barn. In the beginning, FTECO provided flame-hardening services to the machine-tool industry throughout the Connecticut River Valley. In 1954, the company built its current facility in West Hartford. After four expansions, the building grew from 3,000 to 15,000 square feet.

FTECO, which has been an MTI member since 1983, purchased its first induction generator in 1956 and began offering induction heating in addition to flame hardening. The company currently owns 12 flame-hardening machines and nine induction generators.

Today the company provides services to the manufacturers of capital equipment, power transmissions, off-road vehicles, printing equipment, bearings, construction machinery, automobile components and structural powder-metal parts. They also serve the related supplier base to all of these industries.

FTECO has limited its practice and services to the localized heating of metal components. They harden, locally stress relieve and anneal, shrink fit and straighten. FTECO also has a metallurgical lab that can provide investigations and certifications for any jobs processed. Quality is achieved using opti-



cal infrared pyrometers to control and monitor the heating temperature of the processed part.

Combined with the PLC that is used to control motion, indexing, location of the part and other processing parameters, FTECO is able to produce a repeatable process during the hardening phase. They have used these capabilities to develop and build various automated parts-feeding equipment, which allows for repeatable operations to run on a continuous basis. In addition, experiments have led to FTECO's ability to heat multiple parts in one operation. These techniques are used in both the flame-hardening and induction-heating operations.

FTECO, which is ISO 9002 registered, has three automatic scanners on-site that are used to harden various shaft lengths for applications including lead screws, spindles, printing press rolls and other similar components. Pyrometers provide temperature control to the component being heated.

FTECO is constantly evolving. The company has recently purchased an 80 kW generator with an accompanying scanner. They have also just finished rebuilding the automation equipment that allows them to induction harden shafts, gears and sprockets in a continuous manner. Optical infrared pyrometers are currently being replaced with newer technology, and newly designed coils are being developed to enhance and increase productivity.

Brothers Tom and Dave Benoit assumed control of the business when their father, Leo, retired back in 1980, making FTECO a second-generation family-owned and operated business. Tom is a past president of MTI.

For more information: The Flame Treating & Engineering Co., 702 Oakwood Ave., West Hartford, CT 06110; phone: 860-953-3519; fax: 860-953-1723; web: www.flametreating.com.



FTECO