

Non-Contact Induction Bolt Heating: Tightening & Loosening For Turbines Updated

A Mount Olive, NJ-based company specializing in thermal engineering announces updated induction bolt heating solutions for power stations and chemical plants.

MT. OLIVE, NEW JERSEY, UNITED STATES, October 6, 2022 /EINPresswire.com/ -- The latest launch from Thermo International offers clients a powerful method to tighten and loosen large, industrial-scale bolts and fasteners. The company is a sector leader in induction heating, providing expertise and innovation in the coupling of magnetic fields and induction power supplies.

More details can be found at <https://thermointernational.com/2022/08/10/induction-bolt-heating-best-method-for-tightening-or-loosening-large-bolts>

The announcement details Thermo International's years of experimentation and research, developing and fine-tuning the most effective combination of machine power, heating times, and bolt diameter for faster, more efficient induction-based tightening and loosening. The company provides induction bolt solutions for a range of applications, from wind turbines to industrial chillers.

The currents used within the induction heating process are generated via electromagnetic energy. Using an alternating, high-frequency current and applying it to an induction coil creates a time-varying magnetic field. Electricity is pushed around the induction coils placed within the bore of a bolt. Energy is dissipated in the form of heat via resistive losses with the electricity acting as a dead short on the secondary of a transformer. Induction heating is a non-contact method of generating high temperatures on targeted materials or workpieces.

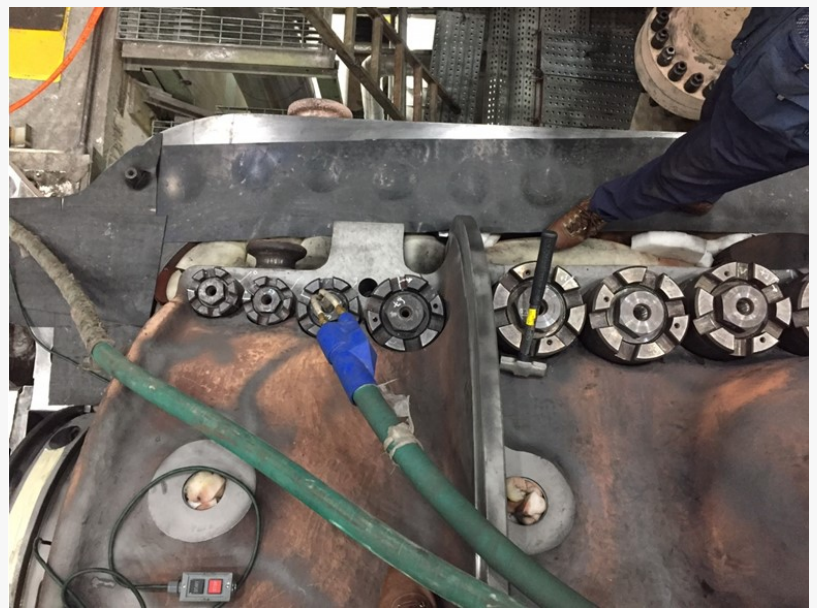
Thermo International offers customers expertise in ensuring this process is as smooth and



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harmonious as possible, enabling, for example, a 50" long and 8" diameter bolt with a 7/8 bore to be heated in just five minutes.

For power generation applications, the company advocates for a minimum of 50 kW of machine power. Less powerful machines eliminate the time-saving advantages of induction heating. For newer gas and nuclear-sized turbines with larger bores, machines need to be more adaptable and able to push out up to 120 kW of power.



Thermo International Induction Bolt Heating

Thermo International can advise on the most appropriate size of [inductors](#) for a machine's running frequency. The company has identified a range of between 8 and 12 kHz as being the most effective. This allows for a greater mismatch between the bore and the inductor while still allowing efficient coupling.

Company spokesperson Jeff Weinacker says, "At Thermo International, we believe we have the perfect combination of [machine and inductor](#). This is even before the tuning range of our machines and an advanced control system, allowing an even greater operating range."

For more information, go to <https://thermointernational.com/2022/08/10/induction-bolt-heating-best-method-for-tightening-or-loosening-large-bolts>

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