



## Steel Horse Shoes

**Objective** To heat a strip of 1025 steel to 1800 °F prior to a forging process for the production of horse shoes. Presently, blanks are cut and heated in a gas fired oven and then forged in the press. With an induction coil in place, the steel would be fed continuously from a roll through the induction coil and into the forging press. In order to meet the increased production rate, heating of the 13" steel section must occur within 10 seconds.

**Material** 1025 Steel strip approximately 3/4" wide and 1/4" thick.

**Temperature** 1800 °F

**Frequency** 75 kHz

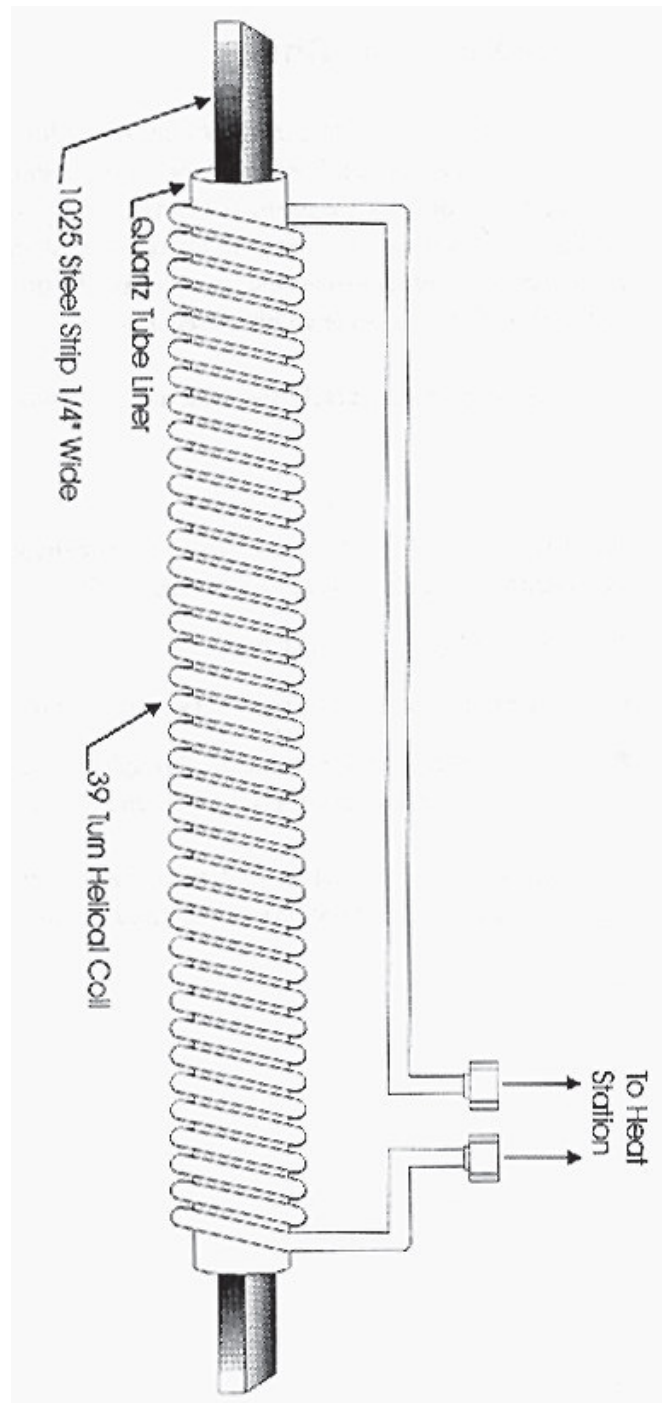
**Equipment** Ameritherm 40 kW output solid state induction power supply including a heat station with a total capacitance of 0.5 µF.

**Process** The Ameritherm 40 kW output solid state induction power supply was found to efficiently achieve the following results:

- Results**
- 1800 °F was reached in 10 seconds.
  - The production rate of 1 part every 5-10 seconds was met.
  - The above results were achieved through the use of a 39 turn helical style work coil measuring 1 1/2" ID and 11 1/2" OAL.

Application illustration on the next page

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