Conveyor steel plate heating

Objective Heat steel plates on conveyor system in order to cook Welsh cakes.

Material Steel plate 760 x 440 x 10mm (29.9 x 17.3 x 0.4 in.)

Temperature 200 ºC (392 ºF)

Frequency 87 kHz

Equipment Ambrell 40 kW induction heating system, equipped with a remote workhead containing one 1.3µF capacitor.
An induction heating coil designed and developed specifically for this application.

Process A flat serpentine heating coil under the steel conveyor system heats the steel plate to a uniform temperature of 200 ºC (392 ºF) in approximately 3 minutes. The Welsh cakes are placed on the hot steel plate and cook for 1½ minutes. The conveyor moves the cakes off the coil where they are flipped. A second pass over the coil cooks the other side.

Results/Benefits Induction heating provides:

- Clean heat directed only to the steel plates. Minimal heat is radiated to the adjoining areas.
- Safe, comfortable working conditions for the operators
- Lower operating cost compared to gas-fired ovens. Reduced cost to run air conditioning system because less heat is released into the working environment.

Next page for photos.

Download and print our Applications Lab Process Sheet (http://www.ameritherm.com/PDFs/4110038b.pdf). Answer the questions on the form to help us understand your process and performance requirements. Call with the info on the form to see if you should send us your parts for a free evaluation. If you have questions, call or e-mail us (info@ameritherm.com). We'll be in touch!