



Annealing the end of steel wire on a woven wire mesh

Objective To heat 3" (76.2mm) from the end of the wire on a woven wire cloth 60" (1.52m) long. This prepares the wire mesh for bending in a press brake.

Material Woven wire cloth (steel) made of 1/2" (12.7) diameter wire, 60" (1.52m) long. Wires are 1.5" (38.1) apart

Temperature 1400 °F (760 °C)

Frequency 9.1 kHz

Equipment

- Ambrell 250 kW induction heating system, equipped with a remote workhead containing three 25 μ F capacitors for a total of 75 μ F
- An induction heating coil designed and developed specifically for this application.

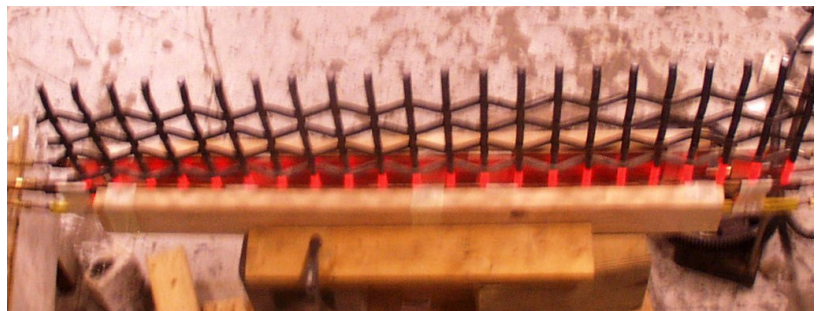
Process A two turn oval coil is used to heat the woven wire. The woven wire is placed in the coil and heated for 15 seconds to soften a 60" (1.52m) length of the wire 3" (76.2mm) deep. The woven wire is then placed in a press brake for the bending process.

Results/Benefits Induction heating provides:

- Faster production process
- High efficiency, low energy costs compared to gas furnace
- Fast, controllable process
- Hands-free heating that involves no operator skill for manufacturing



Woven wire mesh in coil prior to heating



Woven wire mesh glowing as heat is applied for 15 seconds