**SHRINK FIT APPLICATIONS**

**Customer:** Corus

**Client:** Spartan UK Ltd (Gateshead, Tyne & Wear)

**Job Description 1:** To apply heat to the outside of a 10ft diameter drive gear to enable the 2.5ft diameter shaft centre hole to increase in size by 0.040” to accept the new replacement shaft.

**Precautions** - Care to be taken as drive teeth have been heat treated and shaft hole needs to be kept cool to stop heat transfer to the shaft when the shaft is inserted.

**Pre-heat Target Temp:** (None given)

**Job Description 2:** To apply heat to a bearing for removal.

**Precautions** - Care to be taken when heating the bearing as the bearing is to be reused.

**Job Location:** Corus (Northern Engineering Services)

Scunthorpe, Lincolnshire

**Job Date:** 29.10.04

**Equipment:**

- 2 x 20kw RHS Induction Heating Machines
- 2 x 80ft Induction Heating Cables
- 2 x 50ft Induction Heating Extension Cables

**Results Job 1:** We set up a 2-coil configuration top and bottom of the gear and set a target temperature of 300°C. Switch on time was 1410 hours and by 1900 hours the outside temperature at the gear teeth was 75°C and in 4hours 50minutes the inside diameter of the shaft hold had increased by 0.040”. A target diameter for shaft fitment had been reached and the shaft centre hole remained at the ambient temperature of 19°C.

**Results Job 2:** We set up a 2-coil configuration due to size of bearing and set a target temperature of 100°C. Time to temperature was 15 minutes. Bearing was removed with no excessive heat and no damaged caused to bearing - enabled bearing to be used again.