Bonding Rubber Gaskets to a Steel Gas Intake Manifold

**Objective**
To bond rubber gaskets to the top and bottom of a steel gas tank assembly.

**Material**
Flat and round rubber gaskets, steel gas tank assembly

**Temperature**
300 to 350°F (148.9-176.7°C)

**Frequency**
183 kHz for the flat gasket; 231 kHz for the round gasket

**Equipment**
- Ambrell 5kW induction heating system equipped with a remote workhead containing two 1.25 μF capacitors for a total of 0.625 μF
- An induction heating coil designed and developed specifically for this application.

**Process**
Two two-turn pancake coils are specially contoured to the shape of the steel assembly to produce uniform heat in the gasket areas. The gaskets are positioned over the joint areas. Power is applied for 6.5 seconds to reach the bonding temperature of 320°F (160°C).

**Results/Benefits**
Induction heating provides:
- Repeatable, rapid & accurate heating cycles
- Reduced process time
- Even distribution of heat