

Heating Metal with a Model 5209 High Density Infrared Heater

Application

A remanufacturer brazing metal for aircraft engine repair performed for the department of defense.

Problem

Time and Temperature Requirements - The department of defense had stringent time and temperature requirements that had to be met for each repair process.

Infrared Process Requirement - The department of defense also required that the aircraft engines be repaired with localized infrared heating.

Solution

Heat - The aircraft engines were heated with a Model 5209-05 High Density Infrared Heater.

Power Control - A Model 664F Phase Angle SCR Power Controller controlled the High Density Infrared Heater.

Process Control - A PLC and Color Touchscreen was used to control the time and temperature of the heating process.

Process Profile Storage - Dimension Memory Cards were used to store the time/temperature profiles for the various repair processes.

System Integration - The High Density Infrared Heater, Phase Angle SCR Power Controller and Industrial Process Manager were integrated as a system and mounted on a mobile base with an adjustable arm.

Benefits

Process Compliance - The Model 5209 High Density Infrared Heater, the Model 664F Phase Angle SCR Power Controller and the PLC Control enabled the remanufacturer to comply with all of the repair requirements established by the department of defense.

Repair Station Mobility - By integrating the High Density Infrared Heater, SCR Power Controller and PLC Control as a system and installing them on a mobile base, the remanufacturer was able to complete repairs in a number of locations with a single repair station.

Ease of Use - By storing the time/temperature profiles for the various repair processes in the PLC by recipe, different repair personnel were able to complete the repairs, as specified by department of defense requirements, without first receiving special training.