

# Heating Metal with Model 5209 High Density Infrared Heaters

## Application

A joint venture to develop and commercialize economically-competitive solar collectors heating metal to simulate solar energy.

## Problem

**Testing** - The heat-pipe receiver, which transfers heat from the solar absorber to the heater head tubes of the power generator, needed to be tested for efficiency.

**Solar Energy** - Testing needed to simulate the solar energy that would be received by the heat-pipe.

**Required Temperatures** - The required test temperature was 1247°F (675°C).

## Solution

**Heat** - Three Model 5209 High Density Infrared Heaters were installed in each of several test cells to simulate the solar energy.

**Power Control** - A Model 664F Phase Angle SCR Power Controller controls the power to the High Density Infrared Heaters in each test cell.

## Benefits

**Solar Simulation** - With the capability for each Model 5209 High Density Infrared Heater to generate temperatures in excess of 3000°F (1650°C) and heat flux densities to 100 KW per square foot (1080 KW per square meter), the heat-pipe receiver could be adequately tested for the joint venture.