

Melting Glass For Fiber Drawing

Objective To heat a metal susceptor vessel to 2200°F within 25 minutes for a fiberglass melting application

Material Metal susceptor vessel

Temperature 2200°F

Frequency 300 kHz

Equipment Ameritherm Nova Star 20 kW RF power supply, remote heat station and a specially-designed induction coil.

Process A specially-designed induction coil, shaped to conform to the metal vessel, was used to deliver uniform heat to the vessel. Initial tests were conducted to establish a heating pattern and time-to-temperature. RF power was applied for 22 minutes and the vessel reached a temperature of 2,200°F. An additional 3kW power supply was suggested for use when the glass in the vessel is emptied through the drain tube.

Results Uniform and repeatable results were achieved with the Ameritherm power supply and coil. The vessel can be maintained at 2200°F so that glass can be melted for fiber drawing.

