Preheating Steel Laminate Parts

Objective: To heat four steel laminate parts (c-lams) for a pre-heating application

Background: The c-lams are inserts for an automotive industry application. In production the robotic pick-and-place will occur for plastic overmolding after heating. The client used resistance heating previously.

Equipment: Ambrell EKOHEAT® 15 kW, 50-150 kHz induction heating system with a workhead and coil specifically designed for this application

Temperature: 190 °C (374 °F)

Frequency: 85 kHz

Material: Steel laminate c-lams

Testing: A thermocouple was attached to the top surface of each outer c-lam in the stack for temperature monitoring. The parts were successfully heated to 190°C (374 °C) within 10.0 seconds with the EKOHEAT, which met the client's objective.

Benefits: • **Speed**: The part heated to temperature in just 10 seconds, meeting the client’s objectives
  • **Precision**: Induction offers more precise heating than the previous resistance heating method
  • **Footprint**: The space-efficient EKOHEAT saved the client space when compared to their previous heating method
The c-lams with thermocouple wires attached to the outer edges.