



Heat the end of catalytic converter for weld testing

Objective Heat the end of lorry catalytic converter exhaust system. The assembly must be held at target temperature for 200 hours, whilst the assembly is vibrated to test the weld strength.

Material Steel

Temperature 842 – 932 °F (450-500 °C)

Frequency 75 kHz

Equipment Ambrell 5 kW, induction heating system, equipped with a remote work head containing two 5 µF capacitors for a total of 10 µF and an induction heating coil designed and developed specifically for this application.

Process/Narrative A four-turn conical-shaped solenoid coil is used to heat the end of the exhaust system during the weld strength testing. It takes approximately 5 minutes to reach the target temperature between 842 – 932 °F (450-500 °C). This temperature is then held for 200 hours whilst the system is vibrated to simulate driving conditions. The weld is then inspected for cracks.

Results/Benefits Precision output of the power supply holds the desired temperature within a tight tolerance.

Photo on next page.

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