

24 January 2018

Energy-Efficient Heraeus Infra-Red Heating System Proves A Winner With The Jaguar F-TYPE

A custom-built, fast response medium wave (FRMW) infra-red heating system from Heraeus Noblelight is helping in the production line fitting of sound-deadening pads to the Jaguar F-TYPE at Jaguar Land Rover's manufacturing site at Castle Bromwich.

With a top speed of 200mph and acceleration from 0-60 mph in 3.5 seconds, it is important that there is minimum transmission of noise from the F-TYPE's supercharged engine into the passenger compartment. To prevent this, highly efficient sound deadening panels are fitted to the car. However, while still retaining their excellent noise-damping properties, the panels can become slightly brittle when cold and to facilitate their handling during manual location on the production line, Jaguar engineers decided to contact Heraeus Noblelight to see if a simple infra-red heating system could help.

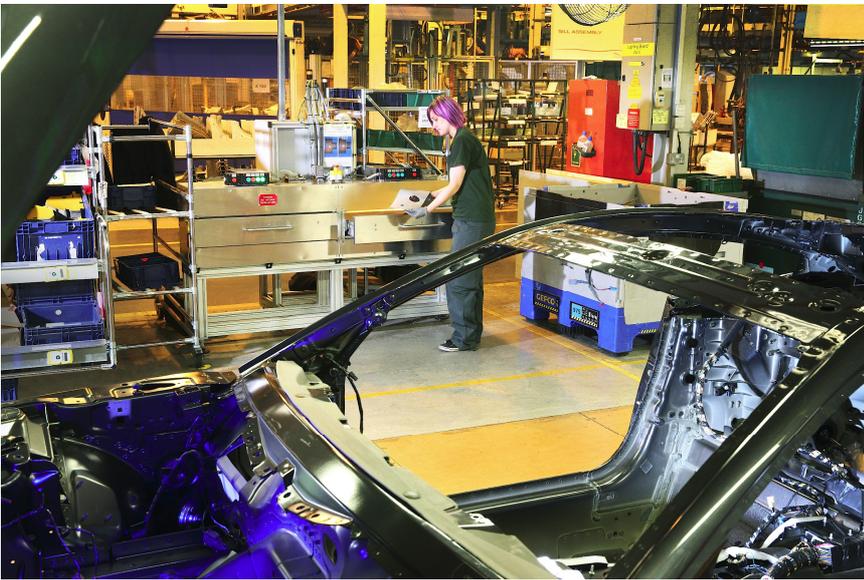
Following successful tests carried out at Heraeus's Neston Applications Centre, a compact 12 kW medium wave infra-red oven was installed at the pad fitting location on the production line. This is contained within a 1.6m aluminium framework, which features two heated zones, each equipped with three, 2kW fast response medium wave emitters with integral gold reflectors for maximum efficiency. Each of the two heated zones also has a sliding drawer to accept five pads, of two different sizes. When the drawers are loaded, with the pads between locating pins, they are shut by the operator and heating commences immediately, initiated either by a limit switch on the drawer or by a push button on the associated control panel. The pads are initially heated to the required temperature, as measured by pyrometers, for 25-30 seconds, at 60-70% power and are then held at temperature at 8-10% power. When the drawer is opened the heating stops and the top pads can be removed for fitting to the car.

The new oven has proved extremely easy to operate and its compact size has allowed it to be comfortably fitted within the limited line side space available.

Heraeus specialises in the production and application of high quality energy sources covering the electro-magnetic spectrum from ultraviolet to infra-red. It has over 40 years experience in infra-red technology and offers the expertise, products and systems to provide efficient and effective solutions to drying, heating and curing problems throughout industry.

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The Heraeus IR oven on the production line fitting sound-deadening pads to the Jaguar F-TYPE at Jaguar Land Rover's manufacturing site at Castle Bromwich