

CASE STUDY

Heat Treatment Furnace Conversion

Magma Combustion Engineering completed a project for a leading metal component manufacturer in the UK which included the replacement of the existing combustion and control system with a pulse-fired high velocity burner based system to meet aerospace requirements for heat treatment.

AIM

An existing heat treatment furnace was little used due to unreliability and poor heat treatment performance. In addition it did not comply with modern requirements for safe control of combustion systems. The customer required that the furnace be made suitable for heat treatment of forged aerospace components, to operate reliably to obviate costly re-treatments and to comply with current practices for safe control of combustion processes.

SCOPE OF THE WORK

The work involved replacing the existing combustion and control system with a pulse-fired high velocity burner based system. The process control used was a Eurotherm T2550 rack based system with an Eycon HMI operator interface.

BENEFITS

The project fulfilled all objectives including successful testing to the customer's RPS 953 derived QMS procedures. This furnace is now used in preference to other furnaces in the plant inventory particularly for post-quench tempering.

CONTACT US

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For all your thermal process requirements.



PHOTOS

A selection of photos from this case study.



Fig. 1 Heat treatment furnace.



Fig. 2 Furnace burners.



Fig. 3 Control panel.

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