

Case Study

Why **Ross Ceramics Ltd** uses **Bullers Rings** as an essential part of its **Statistical Process Control** procedure.



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An Overview of Ross Ceramics Limited

With 40 years of experience in the manufacture of ceramic cores, **Ross Ceramics Limited** is acknowledged as being continually at the forefront of advanced ceramic core technology.

Wholly owned **Rolls Royce** subsidiary, **Ross Ceramics Limited** (RCL) has particular expertise in the manufacture of complex geometry **ceramic cores** used in the investment casting of high performance directionally solidified and single crystal gas turbine engine components both for aerospace and industrial applications.

RCL's materials are developed to give stability at high casting temperatures, no adverse core to alloy reactions, and dimensional consistency. It is for this reason that the use of **Bullers Rings** is critical as part of RCL's routine Quality Assurance procedures.

What are Bullers Rings?

Bullers Rings are **Pyrometric Devices** for accurately measuring the affects of 'Heat Work' within a kiln firing environment.

UK based **Mantec Technical Ceramics Ltd** specialises in the manufacture of 'World Famous' **Bullers Rings**, which are utilised by many of the world's leading **Tableware, Sanitaryware, Brick, Refractory and Technical Ceramics Manufacturers** to measure the amount of Heat Work that has taken place in the kiln, giving an independent, accurate, reliable and essential indication that the firing of the product is correct and unaffected by any variations in temperature and kiln loading.



Heat Work

Heat work is the action and effect of temperature over time on a ceramic product. It is often called '**heat energy**'. Simply put, '**heat work**' is a defined measurement of how you have 'cooked' or 'processed' your product.

Too much or little time at the correct thermocouple temperature and the product may not have been fired correctly—it will be **under** or **over** fired.

