

CASE STUDY

BSC recently solved a complex issue for a company who design and manufacture galley equipment for airlines and railway operators. The company's products include items from drinks makers to fridges, ovens and display trolleys. The products are designed to enhance the in-flight service experience and are used by major commercial airlines and corporate business jets.



The manufacturer needed to design and create a heater block for coffee maker stands. The finished product needed to be high pressure diecast in aluminium. The process wasn't straightforward because the casting had integrated electrical pipework and water pipes coiled throughout the product, making it more complicated.

The company had gone to various other diecasters throughout Europe without success. Fortunately they found BSC who started work immediately.

The challenge was to find the most efficient method of manufacturing the heater block product in high pressure aluminium diecasting without collapsing the integrated water pipes. Involving the toolmaking specialist, the customer and BSC Diecasting at the initial review process was vital.

Tooling design was critical as tooling had to be manufactured with a view

of slower metal feed rates and metal directional stability. Internal electrical and water pipework had to be held in place whilst the tool was closing to keep it in the right position.

Early trials were promising with consistent pipework positions and good visual finish of casting. The only problem that remained was evidence of some small areas of deformation on the water pipework. The water pipes were filled with sand prior to forming the coil shape, but investigations found that the forming process had caused two air voids in the pipes which caused the deformation at the high pressure diecasting operation.

After discussions with the manufacturer, agreement was reached to make a small modification to the water pipes. This modification has since proved successful and eliminated the requirement to sand fill the pipes.

Diecasting further production quantities have proved very successful with no pipework deformation, allowing a continual flow of hot water through the pipes on application in the coffee maker stand.

BSC Diecasting were pleased to have created a suitable diecasting tool which delivered substantially improved results to the manufacturer in comparison to their previous suppliers. BSC are proud to have the UK's best designers, diecasters and engineers as well as the widest range of equipment available. With over 45 years' experience, BSC excel in the most challenging products and are flexible enough to accommodate small or large runs.

The client has been delighted with the diecasting success, which has enabled them to make savings, reduce operational costs, and maintain continuity of supply.