

GF LASER CASE STUDY: WESTCODE SEMICONDUCTORS

Established in 1924, Westcode Semiconductors is recognised as one of the world's foremost manufacturers of high power semiconductors. Westcode began life in London as part of the Westinghouse Brake & Signal Company making copper oxide based semiconductors. During the next 30 years the company developed products based on selenium and germanium and then silicon power devices were introduced in 1957, technology which is still used in Westcode products today. In the 1960's the company consolidated its operation to Chippenham and in 1988 a new purpose built facility was constructed to accommodate the company's engineering, quality, production and sales departments.

PROBLEM

In order to coat a series of aluminium discs Westcode had developed a fixture using two spinnings manufactured from stainless steel.

Each spinning had a series of machined holes which allowed the coating to attach itself to the disc.

When these fixtures required replacing Westcode wanted to find a different method to machine the holes into each spinning.

The current CNC machining method was slow, expensive and did not easily allow for any mid production changes.

Westcode started the search for a flexible, cost effective method of manufacturing.

SOLUTION

After considering a number of solutions Westcode decided upon 3D laser cutting as the best option. With movement in 5 axis this method of cutting and trimming 3D components would meet Westcode's objective to save time and money.

The team at gf laser were initially asked to submit a sample cut spinning to Westcode in order to make sure that the holes could be laser cut within the tolerance of 0.1 mm.

After being passed by gf laser's own quality department the spinning was then sent to Westcode where it passed all the dimensional tests.

Plans were then put into place to move into full production.

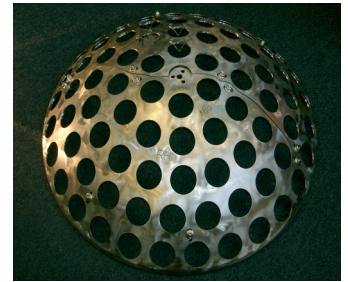
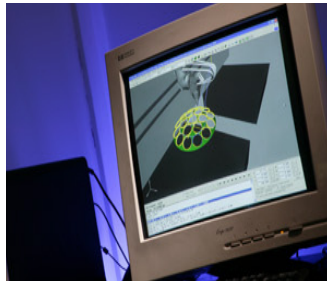
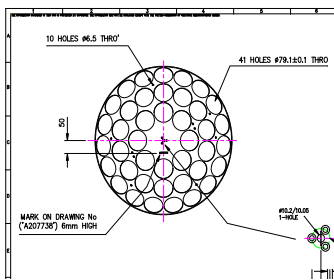
RESULT

As there were over 100 spinnings to cut, the production was carried out over two phases. Two fixtures were constructed by gf laser to hold the spinnings in place whilst the laser cutting was carried out.

The 3D laser cutting process proved to be the right method for Westcode. Each spinning was cut in around 20% of the time when compared to the original method.

It was also possible to make design changes mid-production and utilise the laser etching capabilities of the Trumpf laser operated by gf laser.

The project has been deemed a success and the new fixtures are now being utilised in the coating process.



GF LASER, VAUGHAN TRADING ESTATE, SEDGLEY ROAD EAST, TIPTON, WEST MIDLANDS, DY4 7UJ

T: 0121 557 2294

F: 0121 557 5301

W: WWW.GFLASER.CO.UK