DONCASTERS

Structural Castings of Oxford

To Whom It May Concern:

Doncasters Structural Castings of Oxford (Doncasters) is a leading manufacturer of vacuum and air melt investment castings in Nickel and Cobalt base superalloys. One of the company's recent manufacturing challenges was finding an efficient solution for an x-ray fixture to hold parts during scanning. The existing x-ray fixture took 29 minutes to scan just 24 parts. With growing customer needs and increasing demand for quality and speed, a solution was needed to improve the production process.

Doncasters reached out to Jacksonville State University's Center for Manufacturing Support to explore potential solutions. The Center's team of engineering experts worked closely with Doncasters to design and build a new digital x-ray fixture that would improve the efficiency of the scanning process.

The new fixture design considered the unique needs of Doncasters' production process and utilized the latest technology in additive manufacturing to produce a fixture that could rotate all parts simultaneously using the existing X-ray machine's rotary positioner. The result was a fixture that could automatically rotate and scan 30 parts in just 16 minutes, a significant improvement over the old fixture.

The new fixture's design also allowed greater flexibility in scanning a variety of part sizes and shapes, reducing the need for multiple fixtures, and improving overall scanning efficiency. The fixture was designed so that it could be used with or without the rotating feature. The team at Jacksonville State University worked closely with Doncasters engineers to ensure the new fixture was easily integrated into their existing scanning equipment to minimize downtime.

The improved efficiency of the new fixture allowed Doncasters to grow production capacity while maintaining high-quality specifications. This led to increased customer satisfaction as well.

Doncasters is highly satisfied with the outcome of the project and commends the expertise and dedication of the JSU Center for Manufacturing Support team. The success of this project is a testament to the power of collaboration between industry and academia and the potential for innovation and growth that can result.

Sincerely,

Brett Kirkpatrick

Manufacturing Engineer

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