Trimos V5 Height Gauge

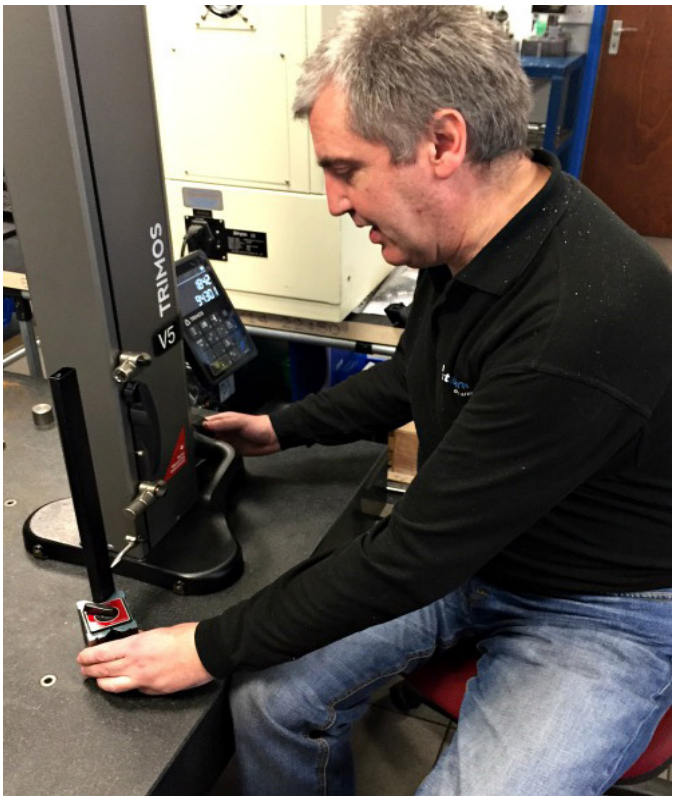
Case Study - March 2017

BOWERS GROUP

Company Name	Voestalpine Rotec Ltd.	Industry	Automotive
Location	Hinckley, Leicestershire, UK	Component Type	Tubular solutions
Product Installed	Trimos V5 Height Gauge		

APPLICATION BACKGROUND

Voestalpine Rotec Ltd manufactures complete tubular solutions for the automotive industry, with products ranging from simple bush tubes to complex assembled parts. Based in Hinckley, Leicestershire, the company has extensive knowledge of tube processing and manipulation. This allows Voestalpine Rotec Ltd to support its customers from the design and development of a project through to high volume production using the latest technology and manufacturing methods.



With branches in the UK, US, Poland and Spain, Voestalpine supplies a variety of global automotive OEMs, Tier One and Tier Two suppliers. As process and materials specialists, the company works closely with customers to develop product solutions that meet high quality standards, and strongly believes in continuous improvement and innovative thinking.

PROBLEM

Some of the automotive parts that Voestalpine manufactures include formed press work, welded assemblies, brace works, and suspension brackets. The company manufactures parts for leading off highway vehicles, global automotive companies, and titanium bicycle frames for Brompton push bikes.

Due to the complexity of components manufactured at Voestalpine, measurements may be required for a variety of dimensions including; height, diameter, hole centres, pitch, flatness, and squareness.

Components are typically manufactured using a laser, with complex dimensions that are notoriously difficult and time consuming to measure. Running the laser for cutting during manufacture is an expensive process, and lengthy measurement processes required for each component makes the costs even higher.

For example, operators at Voestalpine would have to walk down to the opposite end of the factory to use the linear gauge, and then back to their workstations. They would then have to go to a different area to use the vernier, and another for the shadowgraph. First off measurements would be taken, and then tweaks would be made to the component as needed, which then require further measurement. Understandably, the company desperately needed a multi-use piece of measuring equipment; not just for convenience, but also to save time.

Particularly intricate components manufactured by Voestalpine may have over 20 individual holes and slots, which could take operators several hours to measure. In addition, layout inspection is incredibly time consuming. Operatives typically recorded measurements manually, which involved writing down several measurements and then typing it all up later. Not only did this process leave room for human error, it could take a number of hours to record the data electronically.

SOLUTION

Bowers Group supplied Voestalpine with a Trimos V5 vertical measuring instrument, which can either be manually operated or motor driven. Whist the company have existing Trimos Mini Verticals used solely for measuring height, the Trimos V5 universal height gauge is perfect for lab use and the measurement requirements of the company. In addition, the Trimos V5 can be used with software that transfers the measurement data straight to a computer, and then easily displayed in Microsoft Power Point or Excel, or sent directly to the printer.

Bowers Group also supplied Voestalpine with blue tooth equiped hand tools; the Sylvac S_Mic Pro Blue Tooth Micrometer set (0 -102mm) and the Sylvac S_Cal Digital Calipers (200mm) to fulfil their other measurement needs.

COMMENTS

Voestalpine Rotec Ltd Kaizen Manager Keith Wileman said: “The Trimos V5 has been an excellent investment for the business. Not only does the Trimos have a good capacity, the accuracy and repeatability of this device has undoubtedly been a factor in the achievement of our ISO:9001 accreditation.”

The Trimos has enabled us to make huge improvements to processes with regard to both capacity and time. For example, a measurement that may have taken 30 minutes to complete previously can now be completed in approximately 3 minutes. The Trimos is easy to use; training operators to use it during the manufacturing process saves both time and money in the long run, and also allows us to save money on jig fixtures for the alternative methods of measurement we used previously.

The manual process of writing down measurement data could also be time consuming. In some cases, one member of staff would measure the component and another would write it down. Then another 5 or 6 hours would be required to type up the results, again introducing the capacity for human error. The ease of simply measuring the part and the automatic process of data being transferred to software and recorded is a huge time saver.

The data acquired from the Trimos V5 has also enabled us to generate automatic spreadsheets as supporting documents for our ISO: TS accreditation, the International Standard for Automotive Quality Management Systems.”