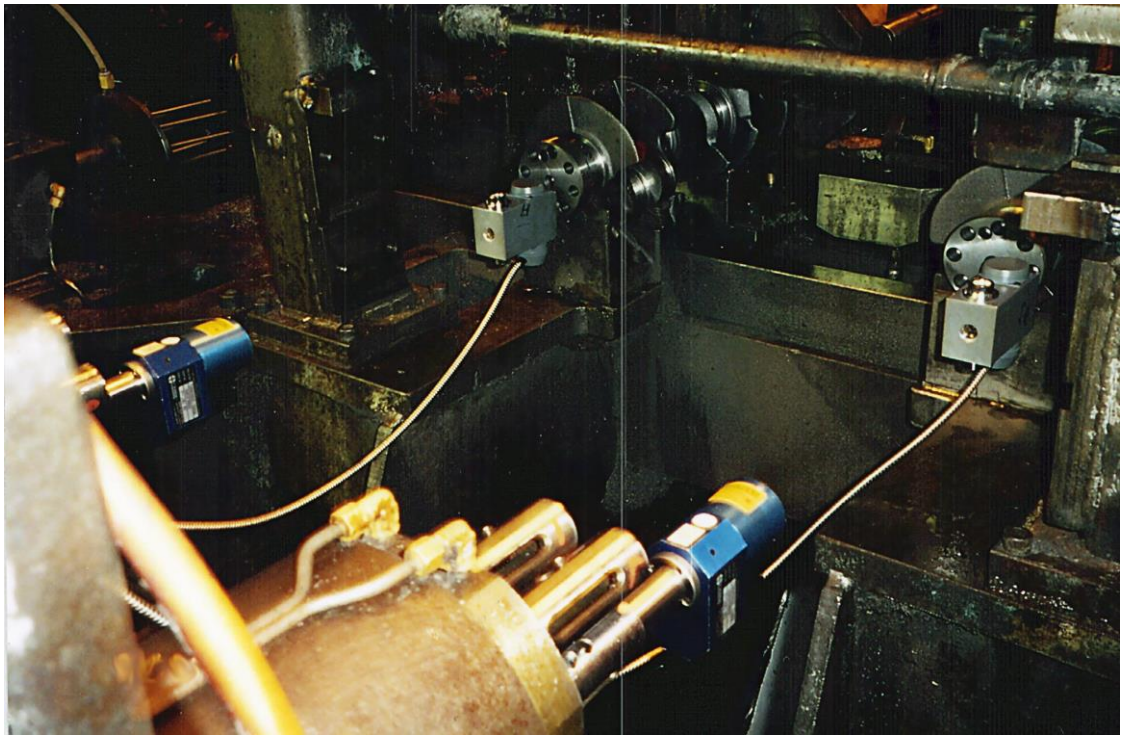
Renishaw Ensures Improved Production Accuracy with Additive Manufacturing



Medical device companies are under pressure to develop new and innovative products constantly. They need the latest technology to produce tiny, intricate, and discrete components. They must also be able to align these components quickly and accurately during manufacturing.

This is where **machine alignment services** come in. Through these services, medical device producers can outproduce the competition and keep up with market demands.

Medical manufacturer Marle Group partnered with Renishaw to refine its production and improve accuracy in additive manufacturing (AM). The partnership focuses on developing better metal powder management.

Case Study: Marle Group

Marle Group initially started as a manufacturer of orthopedic devices. However, it recently expanded by acquiring 3D Medlab, a 3D printing company specializing in AM for the healthcare industry.

Marle 3D Medlab relies on in-house technologies and fast, accurate manufacturing processes to produce sophisticated medical equipment.

Hip replacement components must be accurate to meet industry standards and suit each patient's hip. They also require a quick production procedure.

When a client asked for help setting up additive manufacturing, Marle became interested in the process. However, it needs AM specialists to help them navigate these technologies for themselves and their clients.

Solution: Installation of RenAM 500 AM systems

Marle got in touch with Renishaw and initially opted to get two RenAM 500 AM machines. They used one for research, while the other was for a customer.

Marle trained and built procedures on the system before sending it to the customer. The initial results were a success.

Next, Marle purchased a Renishaw RenAM 500Q Flex machine. It is a four-laser AM machine that can easily transfer laser parameters to the system, allowing full-scale manufacturing. The machine's system allows manufacturers to switch between materials without compromising the build.

This machine also has an additive manufacturing process monitoring (AMPM) module equipped. This was the world's first AMPM installation.

Results: Increased Productivity and Accuracy

Marle used the RenAM 500Q Flex and the AMPM module in modes that can easily switch between various titanium grades.

Due to its increased versatility, the facility can swiftly tailor batches to medical customers' demands. It can make several custom pieces on a single production plate, unlike other processes. This makes the process more efficient and accurate.

Representatives from Renishaw's offices in Spain and the UK helped set up, train, and run Marle daily. The plant will now produce a range of products for the global medical market. Marle worked closely with Renishaw engineers to ensure the facility had the latest manufacturing technology.

Renishaw's support has been invaluable in helping Marle 3D Medlab to get up and running quickly. The company looks forward to continuing its partnership with them as they expand their business into new markets.

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