



DANOBAT

COOPER BEARINGS

SUCCESS STORIES

**OPTIMIZED
SPINDLE FOR
CBN WHEELS**

**EXTERNAL
SETTING
STATION**



SUCCESS STORIES COOPER BEARINGS



.....

Complete grinding, turning and measuring solution for high added value heavy duty bearings

.....

INTERVIEW



Cooper are the world leader in Split Roller Bearing technology having been in the business for over 120 years. They offer a standard catalogue range of bearings plus special custom engineered bespoke, split to the shaft bearings and housings for shaft sizes from 30mm to over 1250mm.

Cooper's solution is aimed at the steel, mining, shipbuilding, energy and construction sectors, where reliability and flexibility are fundamental in the performance of this product.

In 2010 Cooper Roller Bearings contacted Danobat to develop a vertical grinding machine. What process was used in those days for machining parts? What did you see in DANOBAT to contract them for this project?

After extensive research including performing trials on test components, DANOBAT was selected as a company able to offer the required mix of field experience, depth of technical know how

and support, combined with the requirement for acceptable return on capital investment. Right from the early project stages it became evident that an out of the box option would not satisfy the needs of Cooper and DANOBAT immediately went to work on machine design modifications, incorporating enhancements and upgrades to prepare a machine to specifically meet the high metal removal rates and fine tolerances required.

One key point for Cooper has been the locality of the Newall business which is part of the DANOBAT group as it is located just a few miles from Cooper. The previous service experience offered by Newall on a number of other smaller DANOBAT machines played a major part in their selection for the bigger machines.

After analysis and work done together by Cooper and DANOBAT engineers, the latter proposed changing the machining process from hard



.....
We would certainly work with DANOBAT again
in the future.
.....

turning to grinding with CBN wheels. How was this technological challenge perceived?

When initiating the project Cooper had a clear vision for incorporating hard turning and grinding processes together on the new machine. As it turns out we still utilise both technologies but hard turning is used to a lesser degree than originally envisaged and CBN grinding is used far more. Working closely together, Cooper and DANOBAT have developed CBN grinding processes and the associated machine design requirements to handle this and as a result, for some process elements, this is by far the quickest means of high stock removal for roughing and pre-finishing.

How did you eventually benefit from the development of a machine with this technology?

The implementation of this new technology has allowed Cooper to add overall capacity and process parts more quickly, which in turn has resulted in greatly reduced customer lead times for large bearings.

These DANOBAT machines have been equipped with an external setting table. This reduced the setting times considerably.

Could you explain the benefits of this system on your application?

In the previous process, the part was set inside the machine and this required the machine to be stopped to carry out this operation.

Depending on the component, the machine could be stopped for one or two hours. Now with the external setting station, the operator can set the part while the machine is running. We believe that this is a big improvement in the overall process as now there is no machine down time.

Bearing in mind this experience and the two already installed DANOBAT vertical grinding machines, would you consider DANOBAT a partner to continue with in developing future solutions?

The overall experience of working together with DANOBAT has been very positive, both parties have gained new knowledge and benefited from the experience. We would certainly work with DANOBAT again in the future.