

Press Information

METALLOCK'S ORBITAL MACHINING EXPERTISE KEEPS BALL MILL IN PRODUCTION FOR RUGBY CEMENT

Following a journal failure on a 40-tonne/hour cement ball mill at RMC's cement plant in Rugby, Metallock Engineering UK, Coventry orbitally machined the badly scored shaft to clean up enabling a new white metal bearing to be fitted and the mill returned to production with minimum disruption.

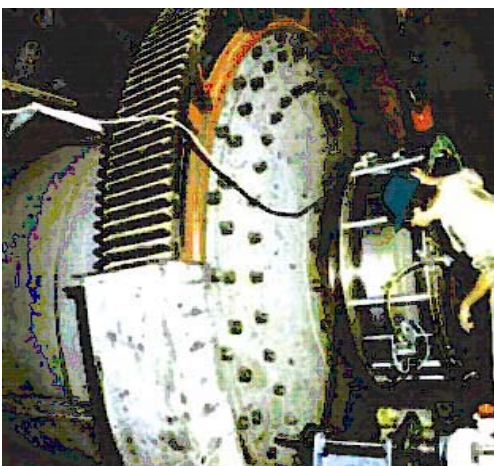
The Rugby Works ball mill had been operational for over 35 years and was due for replacement, indeed the new machine was on order, but the journal failed before the new mill was due for delivery. The mill is the last on the production line and blends and grinds clinker and gypsum together with other additives to make cement. As production could not be suspended until the new mill arrived, the Rugby Cement management team called in Metallock to discuss the situation and a possible solution.

Metallock's recommendation was to orbitally machine the 1200mm diameter, 600mm long journal and remove sufficient material to clean up the shaft. This was accepted and following removal of 3mm from the diameter, the mill was re-assembled using a new white metal bearing to suit the revised shaft dimension.

Orbital machining involves having the cutting tool revolve around a stationary shaft. To achieve this at Rugby Cement, the inner bearing ring of the orbital turner was attached to a temporary bearing housing on the ball mill casing with the outer bearing supported on a temporary shaft extension. The rotating cutting tool head was driven via a hydraulic motor.

Orbital turning is just one of the services Metallock offers as part of its on-site machining capabilities. Others include milling, grinding and boring, all using specialist portable machine tools that the company has designed and built. This latest application demonstrated Metallock's ability to provide solutions in emergency situations and enable a customer to resume production quickly and efficiently.

Commenting on the Metallock operation Julian Ward, Plant Maintenance Engineer at Rugby said that they knew the mill was reaching the end of its life but hoped it would remain in production until the new one arrived. "It didn't, but Metallock's expertise helped us out of a spot and got us back into production with minimum delay and disruption", he added.



In a typical ball mill orbital turning operation the inner bearing ring of the orbital machine is attached to a temporary bearing housing on the ball mill casing with the outer bearing supported on a temporary shaft extension

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