

case study

upgrade

BOOSTING PERFORMANCE AT CEMEX PLANT

David Brown's expertise made a strategic upgrade at CEMEX's South Ferriby plant possible while minimizing expensive downtime.



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CEMEX contacted David Brown regarding an analysis of the drive train to determine the service/safety factor under current conditions and the anticipated life expectancy of the gears, bearings etc. The company was seeking a solution that was both cost effective and minimised disruption to production.

David Brown reviewed the system, assessing the girth gear and associated drive, identifying that the existing cardan shaft gear couplings were not adequate for increased torque and duty but were already the largest of the standard "X" type.

A solution was immediately offered and subsequently accepted, the chosen route being to manufacture a complete new cardan shaft unit and pre-assemble with upgraded single engagement gear couplings of the Heavy Duty type (623 size 16).

In addition, the old shaft was assessed for suitability for re-use to the same specification as the new assembly, thus providing a strategic spare as further protection.

The upgraded couplings gave an increased safety factor of 2+. Furthermore, as the whole cardan shaft assembly could be changed complete without the need for removing and refitting gear hubs to the old shaft, the installation ensured minimum downtime for the operation.

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With downtime minimised, safety factors enhanced and the additional bonus of strategic spare coverage, the operation is now running safely at higher production levels.



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