Metalock Engineering UK

Press Information

EARLY FINISH TO METALOCK'S IN-SITU MACHINING WORK AT ROGERSTONE TO PREPARE ALCAN'S WAY FOR MAJOR MILL UPGRADE

Not only was Metalock Engineering UK congratulated by the customer on its efficient and professional work in preparation for a major mill upgrade for Alcan Rolled Products, Rogerstone but the task was completed 24 hours ahead of programmed completion. The contract, which Metalock secured against major multinational competition, involved extensive in-situ machining work on five rolling mill stands during the summer shutdown.
In recent years Coventry based Metalock has undertaken a wide variety of similar projects in steel and aluminium plants around the world. As a result, the company now has the advantage of an extensive range of own-design specialist portable machine tools for in-situ work on rolling mill housings. The tools have been developed to give high metal removal rates, consistent accuracies within plant manufacturers' tolerances and versatility, enabling them to be adapted for all sizes of rolling mill stands.
On the warm mill at Alcan the main machining emphasis was to restore vertical wear plate faces and modify the mill housing windows on stand H4 to permit the fitting of 'E' blocks. These enable the operators to effect bend on the work rolls and ensure consistent rolled product thickness across the 88-in wide mill.
Due to the tight time limits of the plant shutdown, Metalock had designed jigs and milling devices to permit simultaneous operations on both operator and drive side windows. The housing windows were machined for their full height of 4.3 metres and 356mm wide to open up the window width from 1524mm to 1536mm, removing equal amounts from each side. Additional cut outs were machined to accommodate the new 'E' blocks by extending the window width to 1618mm for 920mm by 44mm deep above and below the pass line.
As well as the window faces, Metalock had to drill and tap 136 holes ranging from M16 up to M24 in the 'E' block areas. A further 72 holes were required in each of the front faces of the operator side for latches to hold the mill rolls in place and spindle supports for roll changes. Prior to the shutdown, Metalock designed and produced a series of special purpose rail type drill jigs and high speed drilling and tapping machines which substantially reduced the time required for all the drilling and tapping operations.
Metalock also machined the base on the mill's H4 and H5 stands. This was to ensure that the base was flat, level and true to the vertical windows.
A similar upgrade was also planned for the cold mill and for this Metalock machined 80mm wide by 20mm deep keyways across each of the housing posts on Stands 7,8 & 9. Instead of large E blocks, a similar system, devised to cause less disturbance to the mill, was to be fitted and located in the new keyways.
To ensure that all the operations could be completed within the allotted time Metalock had a team of 25 engineers available on site. On completion of the project, Alcan Rolled Products' Chief Engineer, Sandy Fraser complimented the Metalock team on its professionalism, safe working practices and its ability to integrate very well into what was a busy area of the mill.

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