MAXITOOL ENGINEERING

CLIENT: Cape Flattery Silica Mines
PROJECT: Replacement of Reclaimer Tension Bars

Scope: Manufacture 6 new reclaimer tension bars as part of refurbishment project.
Specific Challenges:

- Manufacture of steel stock exceeding standard supplied sizes.
- Managing heat distortion with large plate thicknesses and weld sizes to keep bars straight.
- Complex weld geometry that had to meet requirements of radiographic NDT.

Solution: To achieve the specified lengths a solution was conceived to strip-cut the bar stocks diagonally from the largest available plate size. This not only negated the risk associated with using standard sizes and adding another full penetration weld, but turned out to be more cost effective. Construction of the tension bars required 16mm fillet welds with a concave contour. The welding inspector was very strict about the size and shape of these fillets but our fabricators were up to the task. They meticulously produced these fillets, each consisting of 6 runs, and passed all visual and radiographic testing with ease. When completed, the pin centre dimension of the longest tension bar assembly (two bars with a pinned joint) was accurate to within 1mm over the 20m length. A transport frame was also supplied to improve handling practicality.

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