DRIVE REBUILD FOR A STEEL FABRICATOR MILL

Drive Design Requirements

Product Type: Steel scrap

Capacity: 75 Tons per hour

Duty: 24/7

Drive: 24 Heavy, Under mount

Customer Challenge

An existing Triple/S Dynamics customer who is a steel fabricator mill, producing steel long products, including rebar, angles, channels, flats, rounds, squares, post, wire rod and other special sections, contacted us due to drive failure for a 14 year old drive unit originally designed and manufactured in 2007 for use in a steel scrap furnace. The original 24 heavy under mount drive was configured to receive, convey, and preheat steel scrap at a rate of 75 tons per hour. The drive unit was returned by the customer to our facility for complete tear down and inspection.

Triple/S Solution

Triple/S Dynamics scheduled an inspection and the analysis determined the shaft and gear exhibited failure modes that were consistent with fatigue. The drive functions in a harsh environment (transporting scrap metal into an electric arc furnace) with heavy loads, abrasive debris, high tempatures and long periods of continous operations and had seen increased runtime due to increased production.

DRIVE OPERATED 24 HOURS A DAY/ 365 DAYS A YEAR/ FOR 14 YEARS = 122,640 TOTAL HOURS OF OPERATION

Following inspection of the drive unit, our customer was notified of the findings and the customer made the decision to move forward with ordering the drive rebuild with an upgrade to all gears forged (no cast), all bearing journals ground on the shafts, sub relief radius at shaft diameter change, and covers and housing that hold oil to have complete single piece gaskets.

Triple/S and the Customer

This customer and Triple/S Dynamics relationship dates back to 1984 with various equipment (43 units total) which include Slipstick Industrial Conveyors, Vibrating Conveyors, Gravity Separators, Stoners, and High Speed Screens installed in various locations.

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