



MARINE CASE STUDY ULTRA DYNAMICS

Ultra Dynamics are a manufacturer of marine jet engines for the private and military sector. Crane Services were asked to attend to an urgent problem at their assembly and production plant in Cheltenham.

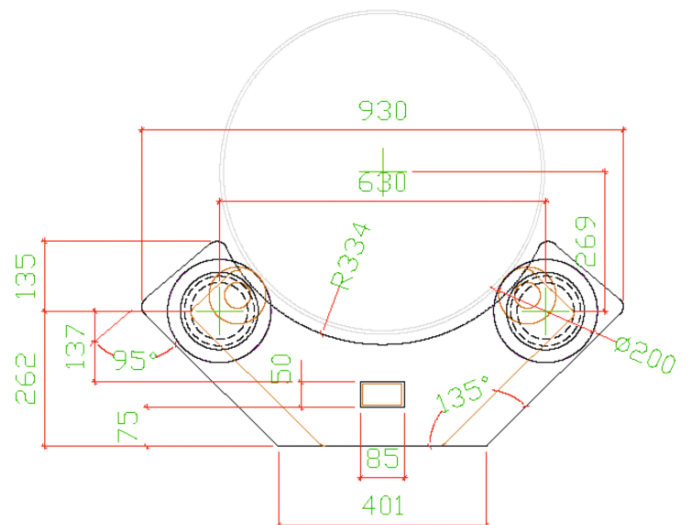
Their 5 metre radius 2 Tonne swing jib was extremely stiff to push around, due to age, wear and ingress of moisture in the top bearing. It had become a two man operation to slew the jib, with little or no positional accuracy.

The brief

Design a method of powering the slew function of the jib crane, and modify the control system to suit, with minimum disruption to the existing production environment, in as fast a time as possible.

The solution

The jib had an existing roller frame, constructed of two bearing rollers which ran on a flat belt of steel around the radius of the jib post. We chose to design a new twin wheel roller frame, with deeper wheels to increase the surface area contact, both driven by live axle drive motor gearboxes to ensure an even pull when slewing.



On completion of the fabrication, the jib arm was removed on site and transported back to our factory to allow the new powered roller frame to be installed.

The pendant was changed, and the electrical control system was reconfigured to fit a frequency inverter drive to the powered roller frame motors, to allow fine speed control and gentle acceleration and deceleration of the slewing motion.

In addition, the top bearing was replaced, and a lubrication point was machined to allow the bearing to be lubricated without the need for removing the jib arm.

The result

A cost effective method of improving the safety and control of the lifting application, plus a reduction in requirement for manual handling and the associated risks.



Ultra Dynamics are loading extremely valuable engines into test rigs and jigs, so fine control and positioning to ensure the safety of their components is of the utmost importance.

**For all your lifting and crane service enquiries
contact Sales on 01384 370318**