



HEAT TREATMENT CASE STUDY

ZOTIC LTD

Zotic offer a case hardening service to industrial sectors. Zotic approached Crane Services to see if we could solve a problem with their production flow, which other lifting companies had failed to solve.

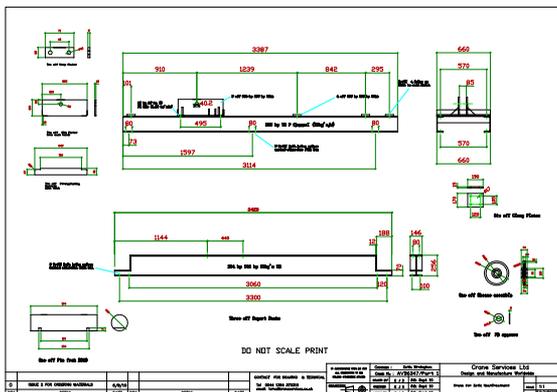
The brief

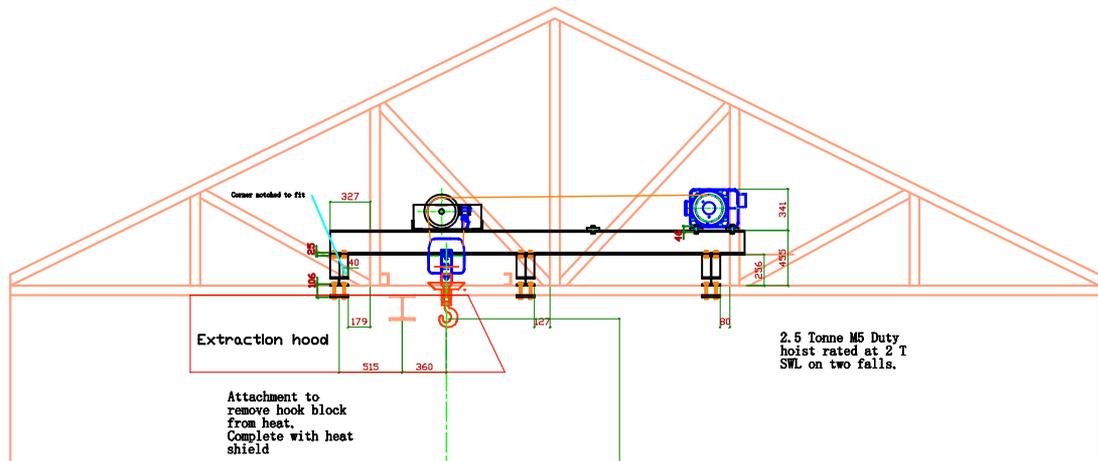
Zotic have several heat treatment pots running under an extraction canopy where the ambient temperature can be as high as 200°C to 250°C. Originally the system used manual lifting equipment mounted on a single runway beam at the top of the canopy. Due to the increased process speeds required and concerns over Health and Safety, Zotic needed an electric hoist which was capable of operating in such arduous conditions, whilst being controlled from a safe distance. They had already been supplied with numerous electric chain hoists, which had quite literally “melted” in the environment.

The solution

Crane Services designed a purpose built hoist application which, mounted outside the canopy in the roof structure, the ambient temperature is a more acceptable 30°C. The hoist was fitted to the roof trusses with a bespoke sub frame chassis which incorporated a diverter sheave to allow for a horizontal feed of the rope drum. The rope was then diverted through a small opening into the canopy, around the bottom hook block sheave and then back up out of the canopy to an anchorage point.

This ensured that only the rope and the hook block were ever subjected to the higher temperatures, both of which are not as susceptible to the effects of heat.





The rope hoist was modified to allow for several limit positions for safety, and to allow a load limiter to be incorporated within the electrical circuit without the dead end of the rope returning to the hoist.

For ease of maintenance the control panel for the hoist was fitted at ground level. The system was also fitted with a Flex 4 radio control system to ensure the operators could control the hoist from a safe distance.



The result

A bespoke lifting solution has been achieved, which has met the design brief, and has improved the speed and control of the process as required, whilst ensuring the safety of the customers lifting operation.

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