



CASE STUDY

Reference #63

Customer: POSCO-THAINOX

Segment(s): Herkules WS450 Complete Retrofit

SUMMARY

Complete mechanical re-building and electrical CNC retrofit including new roll measuring system.

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THE CUSTOMER

POSCO-Thainox Public Company Limited is the only manufacturer and distributor of premium cold-rolled stainless steel sheets and coils in Thailand. The steel produced by POSCO-Thainox supplies the busy local manufacturing industries in need of Austenitic and Ferritic Stainless Steel.

The steel made in their plants is used in Automotive and Transportation, Food Processing and Medical Equipment, Building and Construction, Heavy Industry.



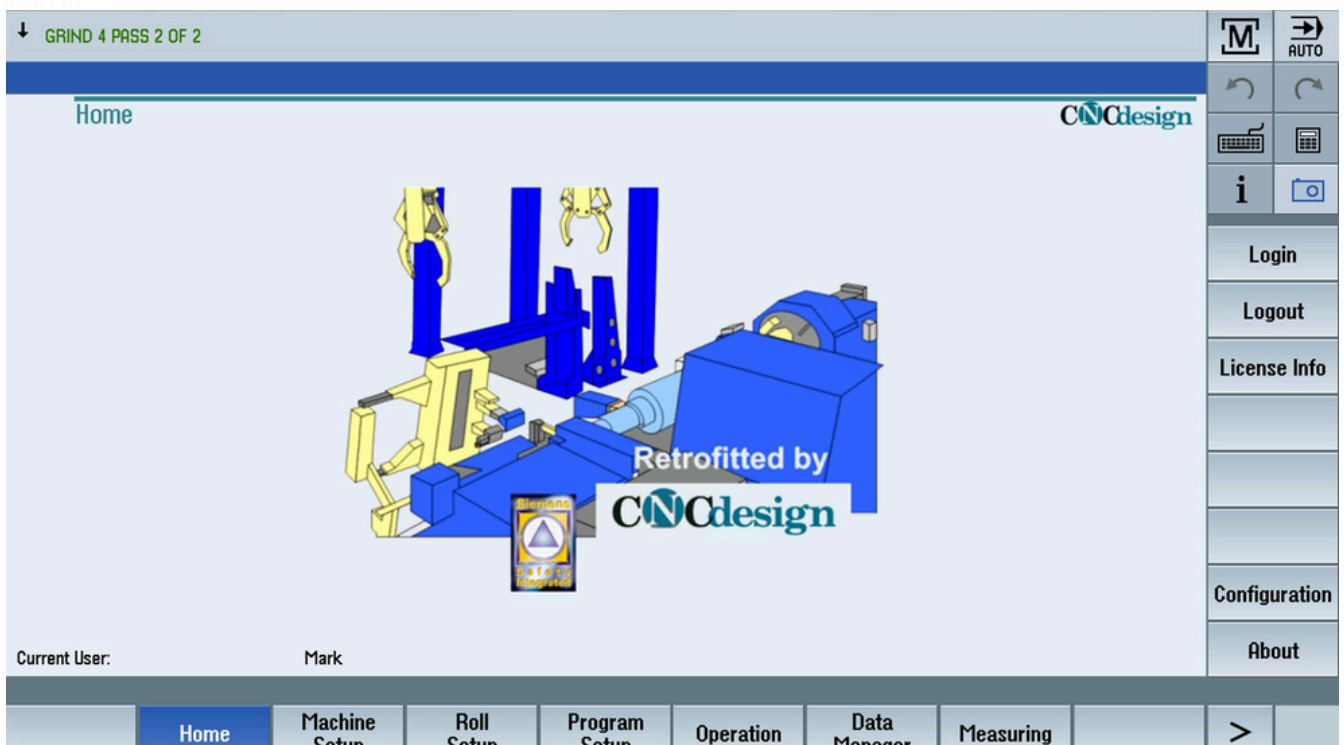
OVERVIEW

Retrofit of a Herkules WS450 Roll Grinder full CNC with SINUMERIK including complete mechanical rebuilding and new roll measuring system.

THE CHALLENGE

When extending their production capacity, POSCO-Thainox had to also extend their capability of servicing their busy cold mills, hence they were looking for increasing the capacity of their roll shops. Given the long and great relationship with our CNC Design Thailand office, we got the request to source, completely rebuild mechanical and CNC retrofit a second hand roll grinder. The challenge was to complete this project in the shortest possible time and within the agreed budget whilst achieving the maximum performance as required for the high end products, similar with the capabilities of a new machine.

Having extensive experience plus a very good and active network in this industry, CNC Design Thailand had identified a suitable machine in Europe. This was a Herkules WS450, suited for the grinding the rolls of POSCO-Thainox but in need of a complete mechanical refurbishment and CNC retrofit. The grinder was moved to our CNC Design factory in Bangkok and the work began.





THE RETROFIT

To achieve the high accuracy required for the stainless steel cold mill, the machine had to undergo a complete mechanical rebuild which started with stripping it down completely and rebuilding all the slides in our factory. Grinding on our slideway grinder, scraping to perfect match and rebuilding all axes transmissions was done in record time by our skilled team.

The wheel carriage was also subject to a complete transformation, which included refurbishment of the lubrication system, completely new grinding spindle, new servomotors and spindle motor for the grinding wheel and rebuilding of all electrical and hydraulic services.





NEW HYDRODYNAMIC SPINDLE AND WHEEL BALANCING SYSTEM INTEGRATED IN THE WHEEL HUB



Full refurbishment of the grinding coolant system including new coolant filtration system.

New hydraulic power-pack and complete rebuilding of the entire hydraulic system.

New lubrication system.

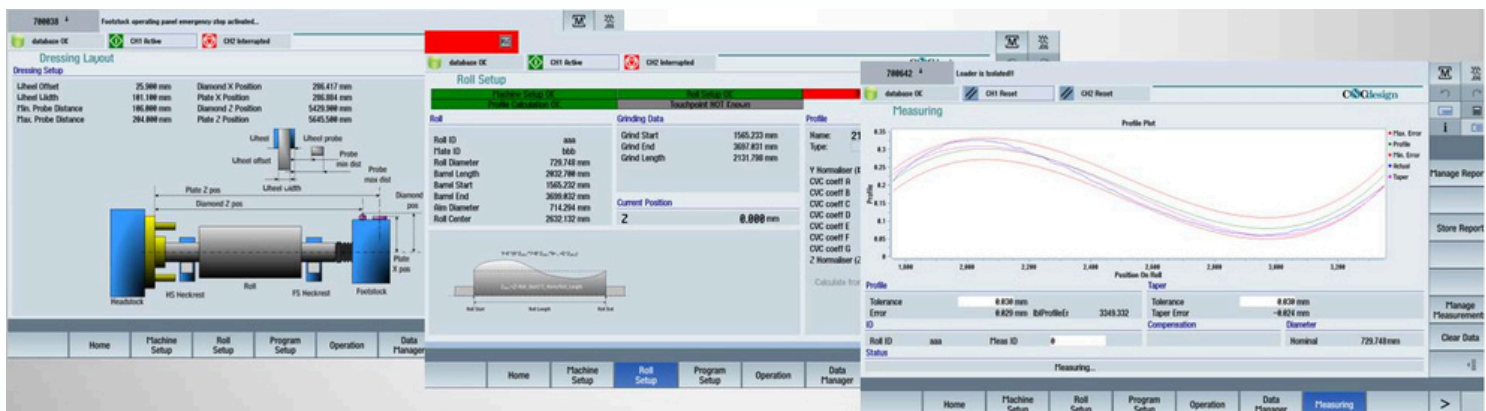
Complete electrical entire machine.

Design, manufacture and integration of a new roll measuring system fully integrated in the control architecture of the new SINUMERIK CNC system.





HERKULES WS450 AFTER RETROFIT GRINDING MIRROR FINISH ROLLS WITH WHEEL UP TO 500 GRIT.



Completed in time, in budget and achieving the grinding performances of a brand new machine, featuring CNC Design software for roll grinders, this is just one of the many successful projects done by CNC Design in this demanding industry....

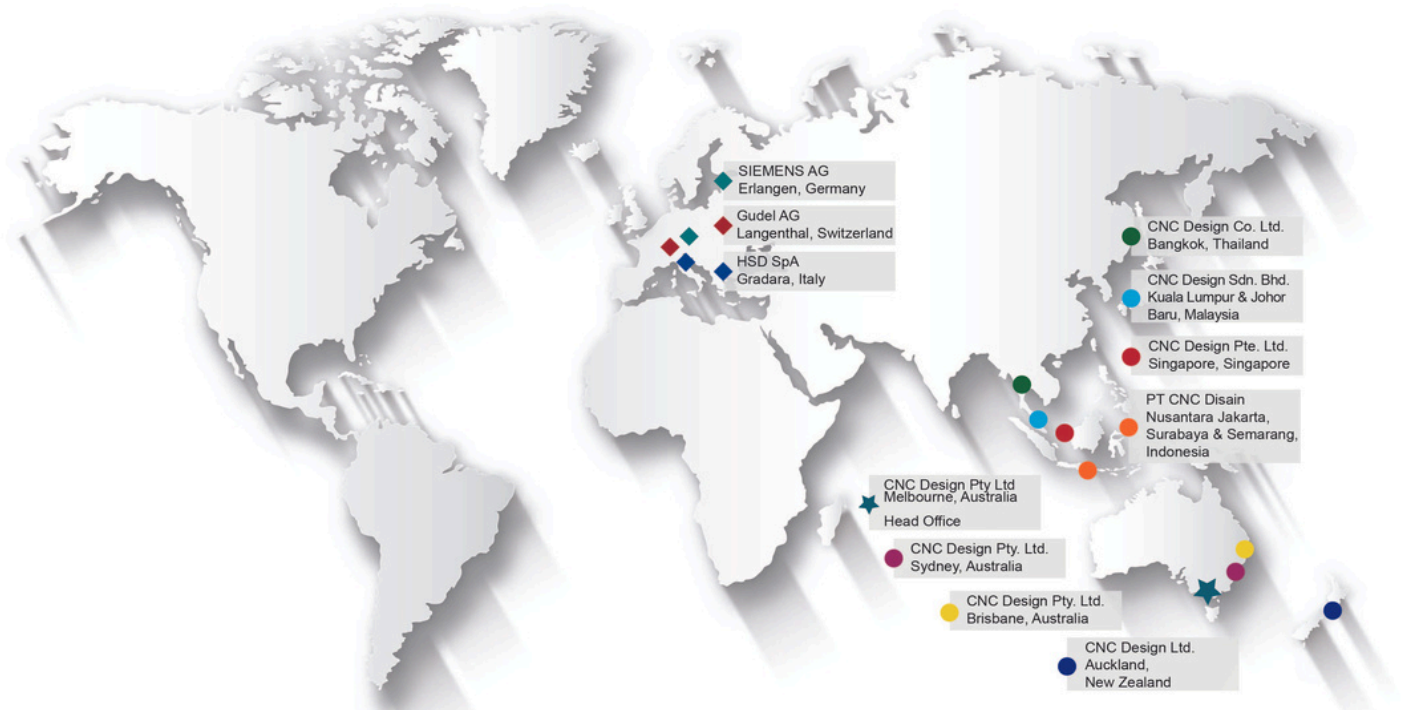


...where the final verdict is always given by the most important person involved in this type of projects –the grinder operator!

THANK YOU



Our technicians are by your side all over the world



★ Head Office

◆ Partners

● Company Branches



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