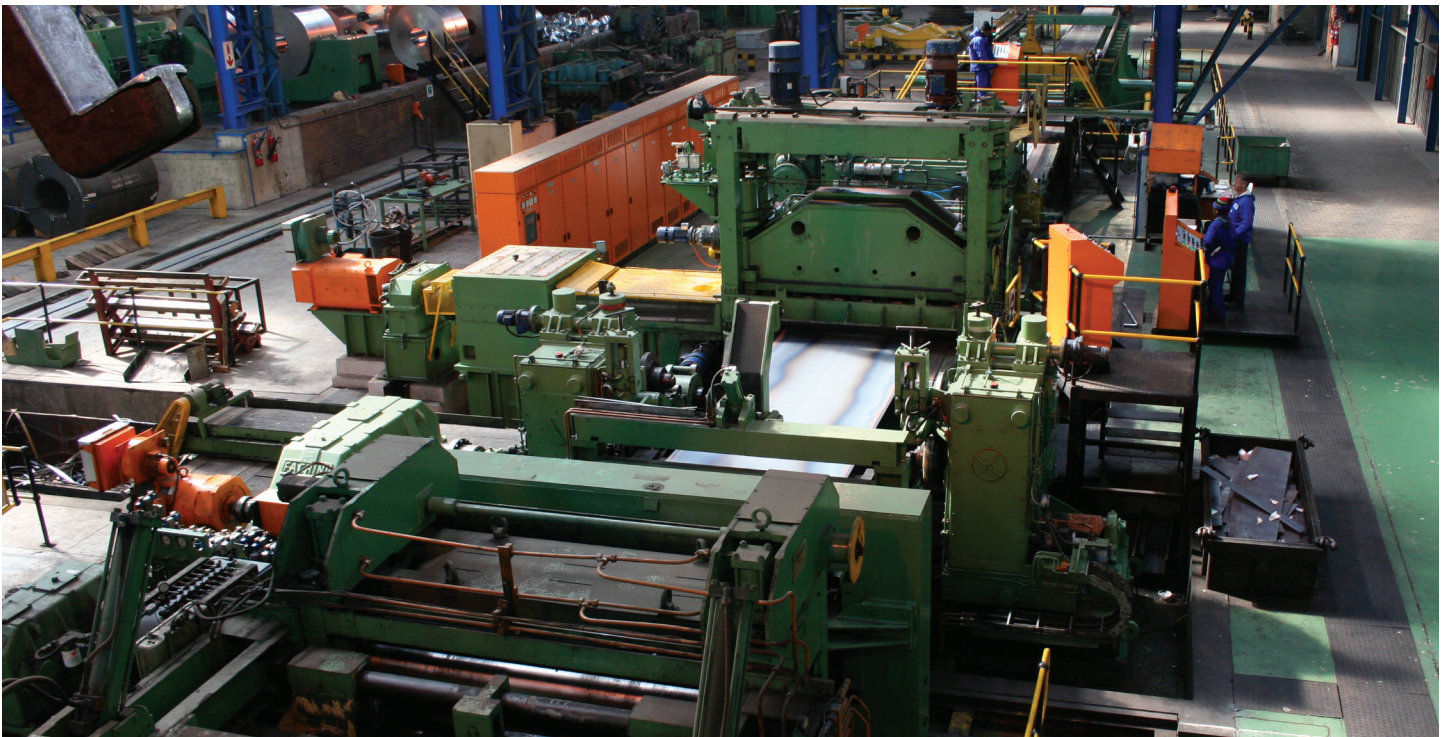


# FLYING SHEAR DOUBLES PRODUCTION AT SOUTH AFRICAN STEEL LINE



**A flying cut-to-length installation on a heavy gauge steel production line at South African steel distributor and processor, Macsteel, has doubled line throughput, reduced downtime and improved accuracies. The control system for this demanding task comprises a suite of 24 AC and DC drives designed by Control Techniques South Africa (Pty) based in Gauteng, South Africa.**

The Macsteel Group is Africa's leading merchandiser and distributor of steel and value-added steel products. A FIMI heavy gauge cutting and shearing line for thicknesses up to 12mm cuts steel to length forms part of their varied production plant processes.

This is achieved with a flying shear that follows the line speed of the steel as the cut is made, avoiding stopping and

starting of the line and maximizing productivity.

When the time came for an electrical and control upgrade of the system, Macsteel specified tighter tolerances on cut lengths as well as highly reliability to cut machine down-time.

## KEY BENEFITS

- DOUBLE LINE THROUGHPUT
- MAXIMIZED PRODUCTIVITY
- REDUCED DOWNTIME
- IMPROVED ACCURACIES
- ULTRA RELIABLE

0115-0163



# CONSIDER IT SOLVED™

Network Power • Process Management • Climate Technologies • Storage Solutions • Industrial Automation • Motor Technologies • Appliance Solutions • Professional Tools

Before the upgrade, the machine had a throughput which was inadequate.

As a major user of Control Techniques drives, Macsteel approached the local Control Techniques Drive Centre, knowing the company's experience in the steel industry and proven record on flying shear and cut-to-length systems in the steel industry worldwide. Local expertise, on-site support and stock-holding of spares was a further factor in their choice.

The system proposed by Control Techniques comprised a total of 24 drives housed in an eight metre suite of cubicles with three new control desks, the main desk having full line control on an 8.4 inch colour touch screen with graphics.

The drives include a 340kW / 900A Mentor DC drive for the leveler 150kW / 420A Mentor DC drives for the straightener and edge trimmer and a 75kW / 210A DC drives for the flying shear itself. Twenty Unidrive SP AC drives were provided for other duties on the line, including conveyors, run-out table and so on.

The whole system was designed by Control Techniques and the panels built at the Gauteng Drive Centre. Macsteel installed the system from drawings supplied by Control Techniques after which the machine was fully commissioned by Control Techniques engineers.

The programme for the FIMI line was written by Control Techniques software engineers using Control Techniques' own software tool, Sypt Pro. A master / follower control philosophy was incorporated with the leveler being the 'Master' of the line. All drives on the line were connected using Control Techniques' high-speed network CT-Net, allowing extensive reporting data collection as well as fault diagnosis.

Now the machine is capable of running at 2 times faster and can accelerate, in absolute synchronism, from stop to full speed in under two seconds!

The result? The upgraded FIMI machine has doubled its line speed. Downtime has been all but eliminated, increasing monthly throughput further thanks to the ultra-reliability of the Control Techniques AC and DC drives.

What's more, Macsteel has reported that accuracies have improved well within the very tight tolerances specified and Macsteel is so delighted with the result that further orders on

rotary knife applications have already been placed with the South African Drive Centre.

The Mentor digital drive encompasses a huge power range from 25 to 1,850 amps in single or four-quadrant format. It has massive systems potential and can be programmed locally using the main control panel, or remotely using serial communications. The powerful plug-in application co-processor (MD29) gives the Mentor local intelligence, programmed, as in this case, using SYPT Pro and CT Net fieldbus communications interface.

The Macsteel Group includes Macsteel Coil Processing, Macsteel Bright Bar, Macsteel Exports, Macsteel Flanges, Macsteel Fluid Control, Macsteel Reinforcing, Macsteel Roofing, Macsteel Special Steels, Macsteel Trading, Macsteel Tube & Pipe, Macsteel VRN and Harvey Roofing Products.



For further information please visit  
[www.controltechniques.com](http://www.controltechniques.com)



# CONSIDER IT SOLVED™

Network Power • Process Management • Climate Technologies • Storage Solutions • Industrial Automation • Motor Technologies • Appliance Solutions • Professional Tools