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**For immediate release**

**MENTOR MP DC DRIVES IMPROVE STEEL THROUGHPUT**

The replacement of analogue DC drives with digital DC drives from Control Techniques for the energising of electro-magnets at Evraz Highveld Steel and Vanadium Limited in eMalahleni, Mpumalanga in South Africa has reduced downtime and increased throughput on a steel bar production line. The electro-magnets are used on overhead cranes at numerous points in the production process for the transport of steel bars.

Previously, analogue DC drives were proving unreliable and destroyed numerous electro-magnets as a result of being over-excited, causing excessive current flow. It was decided that a changeover to more closely controlled digital DC drives was the answer and Mentor MP DC drives from Control Techniques were chosen for the task. This prestigious contract was secured by Control Techniques Southern Africa Pty, who provided a fully engineered solution – the drives being installed by the customer. This follows a long commercial relationship with Evraz Highveld, where Control Techniques drives are standard for the whole plant.

The Control Techniques solution comprises a 210 amp / 480 volt, four-quadrant Mentor MP DC drive for each electro-magnet, in conjunction with a freewheel diode that dissipates the back-emf into the magnet when the magnet is de-energised, providing a discharge path for the current.

Evraz Highveld specified the need to regulate the current very accurately to prevent over-current damaging the magnets and the drives are configured in torque control. The arrangement implemented ensures that the intensity of the magnetic field is maintained irrespective of ambient temperature.

Mentor MP is Control Techniques’ fifth generation DC drive which now integrates the control platform from the world’s leading intelligent AC drive, Unidrive SP, to make Mentor MP the most advanced DC drive on the market, giving both optimum high efficiency performance and flexible system interfacing capabilities.

Mentor MP is designed with both today’s and the future requirements in mind, with full system integration, three slots for option modules, an in-built field controller and very user-friendly software using real units. The built-in no-cost field controller is all most users will ever need and a new external field controller, FXMP25, will provide field forcing for highly dynamic applications, such as where very fast reversing may be required (e.g. machine tools).

Mentor MP spans 25A to 1850A as a single module – 7,400A when paralleled - is available in 12 and 18-pulse configurations for low harmonics and has an optional keypad, available as a high-brightness LED or multi-language LCD version with plain text. A Smartcard provides parameter, PLC and motion program storage and drive ‘cloning’.

As a result of the replacement of the analogue DC drives with Mentor MP units, damage from burning of the windings through excessive current has been completely eliminated, reducing maintenance and downtime and, effectively, improving average line throughput.

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458 words

**Notes to the Editor:**

**About Control Techniques**

Control Techniques, an Emerson Industrial Automation company, is a world leader in the design, production and marketing of electronic variable speed drives for the control of electric motors. Our strategy is to concentrate on delivering drives and servo products that enhance the productivity of our customer’s machines and processes.

We operate through a global network of Drive Centres and Application Centres that both distribute product and add value by building our drive products into custom designed systems and by offering the highest levels of customer service.

Our Control Techniques Drive Centres also provide us with invaluable feedback and market intelligence so that we can further improve our products and service. This customer focused strategy will enable us to continue to grow profitably.  
  
Our competitive edge is based on our unique focus on drives, our strength in research and development, our investment low-cost manufacturing and an effective worldwide marketing strategy.

For the best in drives information visit our website: www.controltechniques.com

**About Emerson Industrial Automation**

Emerson Industrial Automation, a business of Emerson, is a global technology provider that enables productivity, efficiency and quality gains for customers across a spectrum of industries. Our products include alternators, electric motors and drives, electrical distribution devices and mechanical power transmission, fluid automation and ultrasonic joining solutions. Emerson brands include Appleton, ASCO, Branson Ultrasonics, Browning, Control Techniques, Kop-Flex, Leroy-Somer, McGill, Morse, Numatics, O-Z/Gedney, Rollway, SealMaster, and System Plast. For more information, visit [www.EmersonIndustrialAutomation.com](http://www.EmersonIndustrialAutomation.com).

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