



*Press release/application story*

## **DC drives and Scada system improve productivity of steel mill**

*Arundel, England, July 2010.* Sprint Electric has supplied digital DC drives for the control system in a steel mill in Turkey. The retrofit has resulted in improved output, reduced waste and less down time.

The Turkish company Kocaer Haddecilik, founded in the early 1960's, is a producer of profiled steel products: T-bars, square bars, flat bars and custom window profiles. Kocaer Haddecilik needed to increase the production capacity of their facility based in Aliaga, Izmir, Turkey. They contracted VIB Otomasyon, a Turkish company specialized in automation and drives solutions, and their system integration partner Teori Elektrik. By using a Scada system, complete with Profibus, Ethernet and fibre-optic networking, Kocaer Haddecilik was able to improve the steel mill's output, reduce waste and minimize down time. The complete facility from furnace, to shears, to packaging is now controlled using three operator stations and one engineering station.

How the steel is formed and cut by the mills and shears is an important part of the process. The workloads involved made using DC motors and drives a necessity. VIB Otomasyon needed compact DC drives, which could be easily integrated into the overall control system. They choose Sprint Electric's range of PLX digital DC drives.

The PLX has an extensive suite of software application blocks included as standard. The built-in range of macros made controlling three important process stages quick and easy. Cascade control is used to control the tension of the steel between two mills. The PLC automation system allows the operator to control the tension between any two mills, without affecting the rest of the line. This is done using fast calculation of reference speeds, the fast response of the PLX DC drives and the feedback supplied by the 1000 line encoders. The PLX is also used for loop control; by changing motor speeds, the DC drive can maintain zero tension in the steel. To control the flying shear accurately, the PLX's spindle orientation block is used. The built-in software enables quick acceleration, good repeatability and a precise stop position. The 5 cm difference between minimum and maximum product lengths means Kocaer Haddecilik can accurately cut steel depending on its customers' requirements. With the improvements made with their new rolling mill process line, Kocaer Haddecilik expects to double their production capacity.

Besides the metal processing industry, PLX DC drives from Sprint Electric are being used in many other applications including the pulp and paper industry, rubber and plastic processing, lifting equipment, food processing, pharmaceutical and chemical manufacturing. PLX drives are designed to offer a powerful, flexible and easy to programme digital DC drive. The drives' extensive range of application software functions enable difficult tasks to be completed easily and efficiently without costly external hardware. The PLX is part of an integrated range of 2 and 4 quadrant DC drives. The range's functionality and compact design has proven to be ideal for retrofits when a more cost effective, modern drive system is required.

**Pictures:**

- 1: A steel bar being processed in the Kocaer Haddecilik steel mill.
- 2: A view from the operator station at the Kocaer Haddecilik steel mill.
- 3: Control panel with DC drive from Sprint Electric.
- 4: PLX DC drive from Sprint Electric.

**Direct link to detailed product data:**

<http://www.sprint-electric.com/products.php?cid=8&sid=0&pid=17>

**More information about Kocaer Haddecilik:**

<http://www.kocaergroup.com.tr/hadde/english/default.asp>

**About Sprint Electric:**

Sprint Electric Ltd., based in England and founded in 1987, offers a wide range of DC motor control, with over fifty models covering both single phase and three phase, regenerative and non-regenerative applications. From low voltage servo performance controller to highly sophisticated fully digital three phase DC variable speed drive of many hundreds of amps, Sprint Electric products meet the demands of countless industrial applications around the globe. Sprint Electric is committed to providing innovative products backed up by a high level of customer service to the world-wide industrial market. For its outstanding success in international trade, Sprint Electric won the Queen's Award for Enterprise in April 2009, one of the most prestigious business awards in the UK.

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