Hasçelik banks on SMS group’s experience and orders one of the most powerful combined drawing lines for bright bar

SMS group receives order from Turkey

Hasçelik visiting the SMS group stand at METEC 2019. In the front, from left to right: Viktor Härter, SMS group; Naci Faydasiçok, Hasçelik; Falk Rößeler, SMS group; Michael Süs, SMS group.
Hasçelik San. Ve Tic. A.?, based in Gebze, Kocaeli, and operator of the highest production capacities for bright steel bars in Turkey, has placed an order with SMS group for a state-of-the-art combined drawing line (CDL) KZ-RP IIIB/25 to expand both its production range and capacity. The new drawing line, based on the proven Schumag design (bright-steel processing machine designer Schumag merged into SMS group in 2008), comes with optimized features and new developments along the entire process chain.

The SMS group scope of supply includes a coil preparation unit with double coiler, a two-carriage drawing machine, a two-roll straightener, a chamfering machine and the entire electrical and automation system.

With this drawing line, the Turkish company, which has been combined under the roof of Faydasıçok Holding since March 2017, is expanding its production range to include round bars from bar to bar and from coil to bar between 19 and 42 millimeters. In addition, the company will be able to produce hexagons, squares and other sections. The plant will be designed for a maximum drawing force of 250 kN, a maximum speed of 80 meters per minute and a bar length of 2.5 to 6.5 meters. Hasçelik, present in Europe with several sales offices and warehouses, has an overall product portfolio that enables the company to produce drawn bars of up to 100 millimeters, and peeled and ground bars of up to 160 millimeters in diameter.

Commissioning of the drawing line is scheduled for summer 2021.

“We decided in favor of the combined drawing line from SMS group, as it is one of the world's most powerful lines for this diameter range. We bank on an integrated systems supplier who not just delivers the equipment, but also supports us in our work with their technical service,” says Naci Faydasıçok, Chairman of the Board at Hasçelik San. Ve Tic. A.?.

“Hasçelik will benefit from the increased quality, safety, maintainability and process transparency of the
line, as SMS group has introduced significant improvements and further developments in each individual process step. Thanks to perfectly harmonized interfaces, intelligent individual solutions have been merged into a consistent integrated system that provides a maximum degree of automation, productivity, product quality and safety,” says Falk Rößeler, Vice President Bright Steel Plants and Finishing Lines at SMS group.

Special features of the new line are the new coil preparation unit, the completely revised section straightening machines and the two-roll straightener as well as the innovative measuring technology with its monitoring and analysis options. Overall, the new line from SMS group enables Hasçelik to achieve a productivity increase of around 10 to 20 percent compared to a conventional drawing line operating at the same production speed.

The new coil preparation unit with double coiler increases both performance and safety. For this purpose, a new concept has been developed that provides for maximum operator protection and maximum productivity. The coiling and uncoiling processes are hermetically protected by means of solid components and housings that close automatically. The coil head end is fed to the line by a manipulator via radio remote control. This allows the operator to introduce the coil head end with maximum precision while staying in a safe area. If disturbances such as knots occur during uncoiling, the equipment will be shut off automatically. In contrast to previous lines, all hazards in connection with coil preparation have been eliminated. This means that with this patented solution, the preparation of new coils can take place simultaneously with the ongoing uncoiling process at the other coiler crown. This allows for significantly shorter coil change times and increased productivity.

The tried-and-tested two-carriage drawing machine is equipped with an electro-hydraulic drawing jaw control system and a new gear technology with intelligent drive concept that permanently monitors torque,
speed, temperature and wear. For the first time, tools such as an integrated drawing force measurement system enable Hasçelik to take a virtual look into the core process, gaining additional process knowledge. With the automated die adjustment system (ADA), good material straightness downstream of the drawing die can be achieved as early as during the drawing process.

The new pre-straightener and the section straightening machine downstream of the drawing unit are equipped with double-profile rolls and a polygon shaft, thus minimizing changeover times. The settings are made fully automatically and the modular rolls have an optimized pitch. The hydraulic impact shear interacts with the inspection system that detects surface defects. This enables it to define an optimized cutting strategy that increases the output and minimizes scrap. The two-roll straightener comes with a completely new design that focuses on the best achievable straightness: It will be equipped with a hydraulic diameter adjustment system based on SMS group’s PSM® (Precision Sizing Mill) technology, with direct straightening force measurement and with a new plate design frame of enhanced rigidity. The new design enables Hasçelik to change the straightening rolls quickly and easily.

Also the chamfering machine is equipped with a quick tool change device. It has an integrated chip conveyor, followed by a buffer system for finished coils. This guarantees the high performance of the plant also in terms of finish machining.

With the new line from SMS group, Hasçelik follows its vision of being Turkey’s leading producer of special steel as well as an important and reliable supplier for its customers worldwide.

*SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of more than EUR 2.9 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.*