In November 2015, Çemtas Çelik awarded two contracts to Danieli Centro Combustion; the first concerning the revamp of a 50-tph walking-hearth reheating furnace; and the second for a new heat treating complex for rolled bars.

MODERN HEATING SYSTEMS AT ÇEMTAS, TURKEY

Cemtas is a major supplier of alloyed steel bars in Turkey. Around 70% of its products are exported to the European automotive industry. The company has its own steel production and rolling facilities at the Bursa location. It manufactures structural, case-hardened, heat-treatable and spring steels, as well as micro-alloyed grades, stainless steel, free-cutting and boron steels.

Walking Hearth furnace revamp

This prestigious contract rewards the capabilities of Danieli Centro Combustion (DCC) in the application and installation of new technologies to old plants. The driving factor for Çemtas in making this investment was to achieve increased heating quality while improving ambient work conditions, and reduce stack emissions. This will be made possible by replacing the pre-heating and heating burners with new-generation DCC patented burners. Patented DCC flameless burners will replace the current soaking burners. Installation of a new Level 1 / Level 2 automation control system, and new field instrumentation will result in improved combustion and savings in fuel consumption.

Additional benefits will be increased equipment availability and reduced maintenance needs, resulting in lower operating costs. Project execution presents a relatively short time-frame; between the end of May and the end of June 2016, where all site activities must be performed, from dismantling existing equipment to installing new equipment, up to restarting production.

New bar heat treating complex

This investment will make it possible for Çemtas to expand its product mix and to enter the market for hardened & tempered and normalized bar products. The new facilities basically will comprise two lines: a hardening, normalizing and tempering line, and an annealing line. The first line includes an austenitizing furnace, a spray quench system operating with water and water polymer, and a tempering furnace. An innovative solution, with inclined, shaped rolls to be used for hardening and normalizing will be incorporated in the austenitizing furnace. This will ensure bar rotation during the process, thus preventing bar distortion. The annealing line consists of an atmosphere-controlled annealing batch roller hearth and batch furnace operating under nitrogen atmosphere. The proven design of the atmosphere-controlled annealing batch furnace will guarantee high-quality end-products, in terms of both mechanical and metallurgical properties. All the burners equipping the furnaces are DCC high-performance and reduced maintenance type, and present a low impact on the environment.

The whole complex will be managed by a L1/L2 automation and process control system. The heat-treating lines will process bars with diameters ranging from 15 to 100 mm and even flat bars with thickness and width ranging from 5.5 to 62 mm and 46 to 140 mm, respectively. Startup is foreseen to commence in December 2016.