

100-MN push-down open-die forging press at Fomas, Italy

Fomas, the Italian forgemaster, confirms its trust in Danieli Breda with the new 100-MN press to be installed at Fomas headquarters in Osnago.

Danieli Breda (DBE) will supply on a turnkey basis a 100-MN (10,000 tons) open-die forging press for Fomas SpA, the largest Italian producer of high-integrity, custom-made forgings.

Fomas Group manufactures forged products in steel and non-ferrous alloys, destined mostly for power generation, oil and gas, industrial bearings and power transmission markets. Fomas, established by the Guzzoni family in 1955, has factories in Italy, France, India, and China, and is a world leader in open-die forging and ring-rolling technology.

The project, developed on a turnkey basis, includes manufacturing, installation and commissioning of a heavy open-die forging press, push-down type with four pre-stressed columns, for which DBE also will supply the oil-hydraulic package and electrical and automation systems, including the package for integration with a 120-t rail-bound manipulator. Fomas will have an active participation in the project by producing itself about 1,600 t of high-integrity forgings for the mechanical structure of the press.

The forging force, developed by the simultaneous action of three main cylinders, with a plunger installed in the top fixed crosshead, has two different stages of pressure: 305 bar during normal operation, and 340 bar during upsetting. Pressure transmission, articulated from the plunger to the bottom crosshead, will be effected through a pressure rod with spherical caps fitted to both rod ends. The forging stresses due to the process are distributed on the structure by means of four



pre-tensioned case boxes, made of three, huge hollow-forged pieces.

Due to limits on transportation weights, the structures has been studied "ad hoc", divided in multiple pieces to be joined together with mechanical keys and tie rods.

The structure design guarantees an eccentric load at full force of 700 mm with a maximum frequency of 15 strokes per minute.

The mechanical structure with an overall height of 13.5 m, a depth of 6.5 m, vertical daylight of 5.2 m, and horizontal daylight of 5 m, will be the largest and most modern open-die forge in operation in Northern Italy, able to process up to 150-t ingots.

The new press, equipped with the best innovative facilities in open-die forging technology developed by DBE, will be part of Fomas' 100-MEuro development plan, which will start at the end of 2010, allowing the group to expand its range of products for the power generation sector ■



Fomas delegation - Mr J. Guzzoni, Owner and CEO, Mr G. Villa, Purchasing Mgr., and Mr R. Troveri, Agent; visiting Danieli facilities in Buttrio, led by Mr F. Alzetta, Danieli Member of the Board.



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