

New 100-MN Open-Die Press at Fomas



Fomas S.p.A., a producer of open-die forgings and rolled rings, with plants in China, France, India, and Italy, has plans to install a new 100-MN open-die press at its headquarters plant in Osnago, Italy. The press is one element of a 100-million Euros development program conceived to increase Fomas' production capability for power-generation products, and the turnkey contract was assigned to Danieli Breda.

Fomas is Italy's largest custom forger, manufacturing steel and nonferrous products for power generation, oil and gas, industrial bearings and power transmission markets.

Danieli Breda (www.danielicorp.com) will manufacture, install, and commission the new open-die press. Fomas will produce about 1,700 tons of high-integrity structural forgings for the new machine.

The open-die press is described as a push-down design with four pre-stressed columns, and the contractor also will supply the oil-hydraulic package and electrical and automation systems. The latter will include integration with a

120-t, rail-bound manipulator.

Three main cylinders acting simultaneously, with a plunger installed in the top fixed crosshead, will develop the press's forging force. The press will have two different stages of pressure: 305 bar during normal operation, and 340 bar during upsetting.

Pressure will be transmitted from the plunger to the bottom crosshead through a pressure rod with spherical caps fitted to both rod ends. Forging stresses will be distributed on the structure by four pre-tensioned case boxes, made of three, large, hollow-forged pieces.

The structure design is guaranteed for an eccentric load of 700 mm at full force, with a maximum frequency of 15 strokes per minute. The mechanical structure will have 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.

In operation, the new press will be able to process ingots up to 165 tons. It will start up in late 2010, according to Danieli Breda.

