

PRESS RELEASE

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BILSTEIN places Order for Expansion of Fully Automatic Batch Annealing Plant to Tenova LOI Thermprocess

Essen, March 13, 2018 – In December 2017 the company BILSTEIN based in Hagen-Hohenlimburg, Germany placed the third follow-up order to Tenova LOI Thermprocess in Essen for the expansion of the fully automatic batch annealing plant. This furnace plant is the only batch annealing plant in the world with fully automatic stacking of coils and intermediate convectors, an automatic coupling of all media and fully automatic operation of protective hoods, heating hoods, and cooling hoods. Except one operator in the measuring station, no further operation personnel is required any more.

With the latest expansion of its batch annealing plant, BILSTEIN has strengthened its reputation as one of the most innovative companies in the industry and doubled the original quantity of annealing bases. The contract for stage I was placed in 2011 and consisted of twelve annealing bases with six heating hoods and six JET-cooling hoods. The plant started fully automatic operation in November 2012. After a successful test phase, the plant was expanded by four annealing bases in 2015 (stage II). In December 2017, the contract for stage III, consisting of eight further annealing bases was awarded. Production is scheduled to start in autumn 2018.

Hot- and cold-rolled steel strip coils with a coil weight of max. 30 t, an outer diameter of 1,000 mm to 2,000 mm and a coil width of 150 mm to max. 1,350 mm are annealed in this plant.

To meet the requirements for fully automatic operation of the bell-type annealing plant, a series of adaptations were essential for the batch annealing technology itself. In automatic operation, the operating personnel does not have access to the plant. Various independent safety zones ensure that regular maintenance work does not interfere with automatic operation. The plant was designed in such a way that the previously required visual check is no longer necessary. Essential design modifications at almost all plant components including annealing bases, base locations, heating hoods, multimedia couplings, protective hoods and instruments were successfully implemented. Furthermore, the heating hood features a particularly energy-efficient technology that leads to lowest combustion gas consumptions.

Due to the bypass cooling, BILSTEIN is able to extract large amounts of useable heat. Moreover, some of the waste heat is converted into electrical power, up to 400 kWh per annealing charge. Thermal energy of up to 5,300 kWh is achieved by the heat extraction.

Thus the BILSTEIN bell-type annealing plant is not only the only fully automatic batch annealing plant in the world but also the highest-performance, most energy-efficient furnace plant of this type.



Fig. 1: Tenova LOI Bell-type Annealing Plant with Fully Automatic Crane Operation in the works of BILSTEIN, Hagen-Hohenlimburg, Germany

LOI Thermprocess GmbH, Am Lichtbogen 29, 45141 Essen, Germany

About Tenova

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