

BONGIOANNI in North Africa: Modernisation of Teknobrick Production in Algeria

The manufacturer of hollow bricks Teknobrik is located about 20 km south west of Algiers in Tessala El Merdja. For its renovation project, Teknobrik has chosen to commit the order of the new extruder to BONGIOANNI MACCHINE of Fossano/IT.

The final order has been defined at the end of 2015 with a very short delivery time. In fact the extruder Tecno 750 with the de-airing mixer 610D were delivered in February 2016 and are operated with success in Tessala El Merdja since in June 2016.

The Tecno range is developed according to the most modern technological extrusion concepts regarding most of all process control and low energy consumption.

The electric board equipped with inverter controls the feeding reels motors avoiding the excessive accidental filling of the extruder.

By exploiting the data surveyed as reference parameters it was possible to monitor the filling level of the vacuum chamber. Minimum and maximum values are assigned, a software records the changes and intervenes automatically on the frequency regulator which controls the main extruder motor.

In this way, the rotation speed of the auger is modified according to surveyed data with the subsequent advantage of maintaining the augers' shaft at the optimal minimum rotation speed.

This patented system allows:

- constant feeding of the quantity of clay to the die, which means a more homogeneous mixture and a more uniform thrust surface as well as quality improvement of the extruded products
- best extruder efficiency i.e. the energy absorption has a meaningful decrease, maintaining the minimum optimal turns number of the auger
- extruder longer operating time: the minimum turns number allows a slower abrasion of augers, linings, gearings, etc.



Fig. 1 Extruder Tecno 750 – die type Gamma Plus 6 exits



Fig. 2 Tecno 750 Mix 610D

- decrease of the maintenance costs for the machine
- decrease of production costs of the material
- zeroing of human error: the operator "for not incurring in any risks" is inclined to

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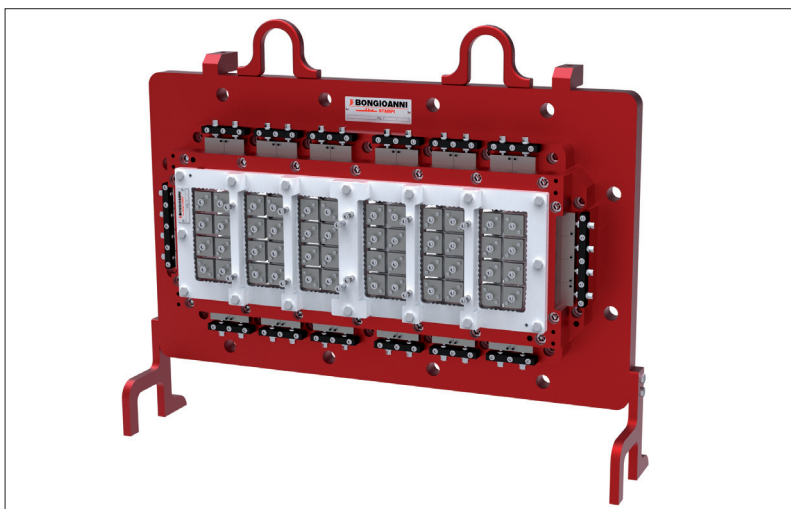


Fig. 3 Die type Gamma Plus for B8 at 6 exits

increase more than necessary the rotation speed of the auger resulting in efficiency. upsetting

Since 2000 up to now, almost 230 BONGIOANNI extruders were sold worldwide. At least two dozen of them got into operation in Algeria during last years.

Besides the extruder the order was completed by BONGIOANNI STAMPI by supplying extrusion equipment consisting of a pressure head with different tapers as well as a die type Gamma Plus for B8 at 6 exits with frame and corn.

The die is made of corrosion-resistant carbide BST02 which is a well-known material very appreciated in the Algerian heavy clay ceramics market.