

Marcheluzzo Ceramics Supplies New Dryer for Refractories Production

Marcheluzzo Ceramics, located in Caldogno, Vicenza/IT, develops and supplies plants for drying and environment control in the production of sanitaryware, ceramic insulators, refractories and heavy clay ceramics. Marcheluzzo Ceramics has recently started up a dryer supplied to Eco Inter S.r.l., a well-known Italian producer of refractories for the ceramic and food industries. The company is located in the Novara Province, in an area where ceramic tradition reached highest levels of quality and technology for tableware, sanitaryware and refractory production in the past.

The supply of the new dryer developed by Marcheluzzo Ceramics follows recent contracts of supplies signed with leading international groups for the implementation of pre-dryers, dryers, air conditioning and power plants for sanitaryware factories located in Mexico, Russia and China. The plant installed at Eco Inter is a static chamber dryer with a drying capacity up to 10 t of refractory materials with cycles

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Fig. 1 External view of the new dryer

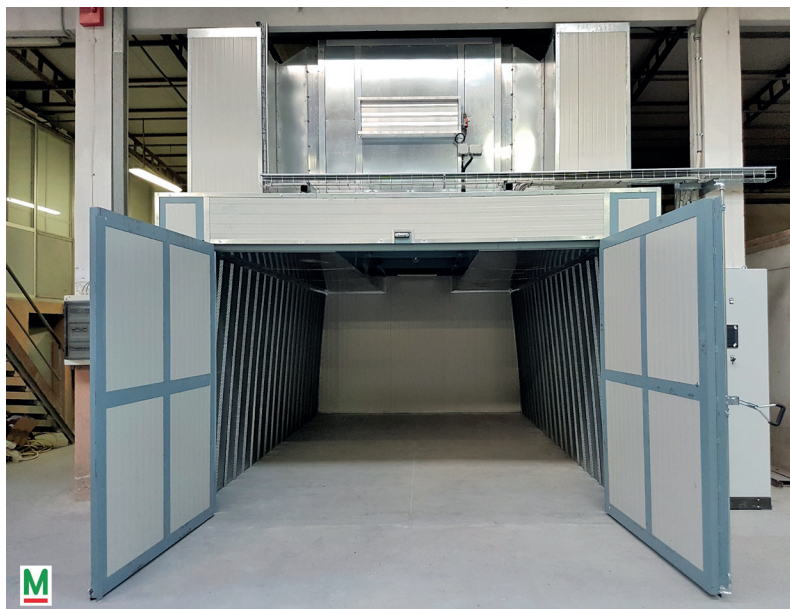


Fig. 2 Internal view of the new dryer

ranging 6–24 h, depending on the product typology. The main components are a multi-damper Air Handling Unit (AHU), a humidifying system based on high-pressure spraying and an injection/extraction control

system for external and moist air in order to manage the thermodynamic parameters of the drying process.

The AHU has the scope to supply hot air mixed with a part of external air to guar-

antee the temperature and humidity values in the dryer's room. The perforated and calibrated metallic sheet located on both lateral sides of the dryer guarantees the maximum air flow homogeneity for the whole refractory material inside the drying room.

An air fume exchanger with a forced draught gas burner, avoiding fume inside the dryer, is used. In this way, the plant can work with complete air recirculation with considerable energy savings. Combined manual and automatic reset thermostats and gas shut-off valves guarantee the safety of the system. Both speed and direction of the air flow inside the dryer are controlled: the speed through the flow rate control by the AHU system; and the direction through an alternative blowing system which assures the programmable air flow from the

right wall to the left one, alternating with the flow from the left wall to the right one.

The dryer works from room temperature with relative humidity saturation, up to a maximum of internal temperature of 100 °C: the air flow along the pieces to be dried has a speed below 0,2 m/s up to more than 1 m/s, depending on the phase of the drying cycle.

The sensors of temperature, humidity, pressure and air speed are chosen as primary brand to specifically withstand the extreme conditions of air humidity and dust.

The whole plant is controlled via a PLC system of latest generation and touch-screen operating panel, management and control of the process parameters are displayed on the screen with the possibility of storing all values.

Dryer operation can be performed automatically and manually, while supervision allows the user to connect to the electrical panel from other locations as well as via smartphones.

Marcheluzzo Ceramics will present the whole range of its technical solutions and applications targeted for the ceramics industry – as ViscoSmart, an automatic control system of rheological parameters for casting and glazing – at the upcoming fairs ceramitec 2018 in Munich/DE, Ceramics China 2018 in Guangzhou/CN, and Tecnargilla 2018 in Rimini/IT, where the company's sales management and the agents, responsible for the Asian, Russian and American markets, will introduce the latest applications and recently supplied plants.



MARCHELUZZO CERAMICS

PROJECT AND MACHINERY FOR CERAMIC INDUSTRY
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Marcheluzzo Ceramics is a byword for top quality and multi-year experience in the field of turnkey plants for ceramic materials. A technical staff with long standing experience makes Marcheluzzo Ceramics Division a reliable partner in the international market for the Ceramic Industry. Thanks to the acquired know-how, Marcheluzzo Ceramics Division is today capable to offer solutions in various industrial fields.

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