

Renovation of VETRERIA DI BORGONOVO's sensational melting furnace

Production activity at Vetreria di Borgonovo is based upon the operation of two end port furnaces equipped with regeneration chambers and rear burners. These have separate dimensions, namely 23 sqm and 41 sqm respectively. Different sizes correspond to different production capacities, namely 60 tons/day and 120 tons/day. Together the two furnaces can feed nine production lines.

SMELTING FURNACE CAMPAIGNS

To guarantee the rate of industrial production, a melting furnace must remain at a constant temperature. This is precisely why shutdown is so infrequent - being necessary only at the end of a campaign. Indeed it's the mechanical and thermal wear and tear to which furnaces are subjected over time that necessitate renovation work. As such, any campaign will correspond to one of many melting furnace 'life cycles' - each of which lasts circa seven years. After each of these periods, a kiln must be switched off

for refurbishment so as to start operating at full capacity again - all to ensure optimum quality of the final product. Here's why each melting furnace has several campaigns and as many restructurings behind it. At Vetreria di Borgonovo, the furnace that's

just been renovated at the glass-works -the larger of the two- reached its fifth campaign this year.

1992: THE FIRST CAMPAIGN

The newly-renovated fur-

Having its roots in a distant past, the glass industry has seen many of its innovations develop over millennia, just as uses of the material and human needs have changed with time. The industrial furnace at VETRERIA DI BORGONOVO is one such example - testifying both to the company's ingenuity and to its ability to always create new and effective solutions.



nace enjoys a long and rather remarkable history. It was first activated in 1992, launching an initial campaign that lasted a full eight years, though subsequent campaigns -such as the latest which just ended- have always had a duration of seven years.

POST SHUTDOWN FURNACE RENOVATIONS

Operations to renew the furnace, from switching it off to restarting it, lasted about a month and a half. Over that period, each step was carried out with great care - all with a view to guaranteeing the final objective, which was to ensure the kind of perfect functioning that's essential for the production of excellent articles of elevated quality. Here the basic steps for refurbishing a furnace can be summarized as follows:

1. shutdown
2. emptying at controlled temperature
3. demolition
4. replacement of worn parts and insertion of the new pre-fabricated building, i.e. new

- refractory material blocks
5. preheating
6. definitive restart



The preheating phase itself lasts about ten days and is required to gradually bring the furnace up to the temperature that will allow it to operate at full capacity, which is 1350/1400°C. To progressively reach this temperature only scrap glass is introduced - that is, a part of the vitrifiable composition which, once melted, will be transformed into liquid glass, given that it has a lower melting temperature.

UNTIL THE NEXT CAMPAIGN

This newly-renovated furnace returned to operation just

recently, thereby inaugurating its fifth campaign - a long life indeed in which, thanks to the added synergy and expertise of the technical teams at Vetreria di Borgonovo, has consistently ensured quality glass. ■



Borgonovo
made in Italy

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