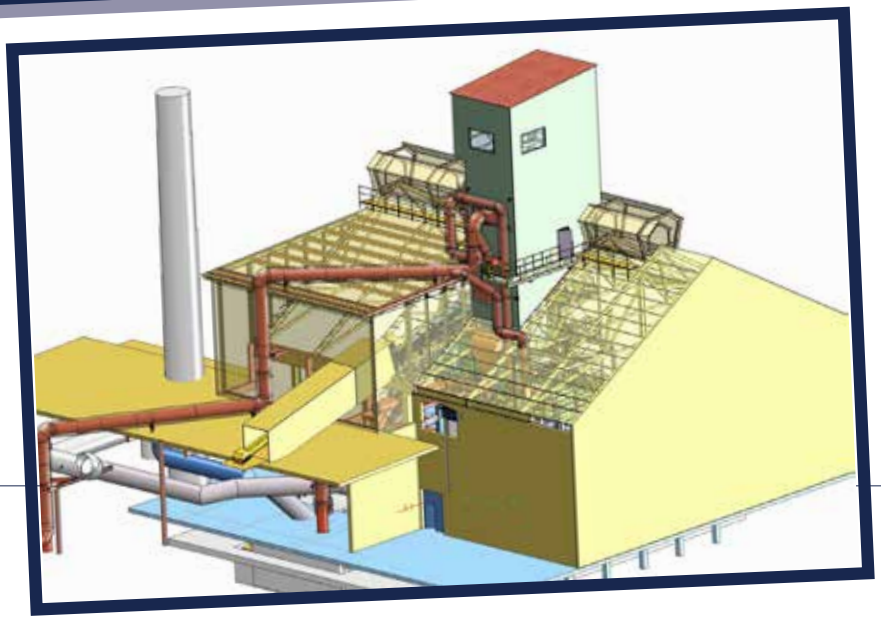
# Electric charging hailed and two Zippe batch and cullet preheaters commissioned in 2023

**Though electric charging of Zippe Industrieanlagen GmbH furnaces add to the company's ongoing in-house innovations, the success stories hardly end there - two of its ABPneo™ next generation batch and cullet preheating systems were commissioned by European container glass producers that had placed orders during the pandemic.**

## AUSTRIA

A project was realized in Austria that involves the next generation batch and cullet preheater ABPneo™ for a regenerative melting furnace which produces coloured container glass. Fired with natural gases, the furnace has an average output of 130 t/d. The furnace is fired with natural gas. Using exhaust gases with a temperature



of approx. 450°C, it is possible to heat up batch and cullet to approx. 180-200°C. Through this process, the customer saves a significant amount of energy, as well as any related costs. Here the proportion of cullet is 60-70 percent.

The preheater was installed as a retrofit at a regenerative furnace with one doghouse. Here, to ensure smooth integration and commissioning, close cooperation with the customer was very important. The rebuild was realized by modifying the batch transport system during ongoing operation within a very short schedule. Indeed the customer is very satisfied with such close cooperation during this phase, which also had Zippe delighted to be able to be of support in reducing both CO2 emissions and energy consumption.

## GERMANY

A further ABPneo™ cutting edge preheater was commissioned in Germany for another major European container glass producer. In this major refurbishment, too, the batch transport, furnace silo area and batch charging system were all integrated. To ensure efficient batch charging of an enclosed dog house situation, Zippe installed the new Vibrotube® charger to enhance the energy balance.

Exhaust gases with a typical temperature of approx. 450°C are used to preheat batch and cullet values up to 200°C. The proportion of cullet glass is 70-80 percent.

The preheater was installed at one doghouse at a regenerative furnace which is equipped with two doghouses - the second of which serving as a standby unit. Installation and commissioning were both mainly realized during operation of the old, later of the new furnace. First results show significant reductions of energy consumption.

A batch and cullet preheater can be planned as an integrated element of batch processing, but also as a retrofit at some later point in time.

As a pioneer of this technology, Zippe continues to refine its capabilities to offer its customers most advanced systems which help to lower melting costs, reduce emissions - all while increasing energy efficiency and plant productivity.

## ZIPPE ELECTRIC FURNACE CHARGING

The use of regenerative energies

is gaining ever more traction in the industry - not only with a view to protecting the environment but owing also -and in particular- to the uncertain supply of fossil fuels. Here's why the glass industry will always be using more electric furnaces going forward. Zippe has long shown itself fully aware of the changes, which is why it can offer the suitable charger for any electric furnaces - whether they be rectangular or polygonal.

When it comes to using electric furnaces, it is important to always cover the complete surface with batch and cullet to ensure energy saving. Here Zippe chargers can handle the task, problem-free.

The company's cold top batch charger is designed to move a vibratory tray feeder or a conveyor belt on two axes - depending upon the customer's requirement. For use on polygon furnaces, the charger is additionally equipped with a belt conveyor which can be moved by means of a servo-driven slewing drive. This guarantees that every spot of the furnace is reached.

Here, at a glance, are the advantages of the Zippe cold top batch charger:

- Energy saving by homogenous batch distribution on the complete furnace surface;
- The batch charger can be used individually for furnace capacities of 400 kg/day up to over 400 to/day for all electric furnaces;
- The adjustable charging capacity is optimally adapted to the furnace by a glass level measuring system. Here, batch charger safety installations and programming options for traversing the furnace surface in different charging patterns, both correspond to the very latest state-of-the-art developments. ■

**Front part CT – Batch charger conveyor belt**




**Zippe Cold Top Charger**