

Control and Documentation Alternatives for Melting Furnaces

Band Alarm under/over Temperature

A band alarm displays the working range for casting. If the temperature is within the range, a green signal lamp is lit and the melt can be processed. In this range, the controller additionally provides for a signal that the customer can evaluate. Example: Release for the foundry robot.

Manual Program Intervention

If the current program is to be prolonged and the controller should not go to the next segment (e.g. continuation of melting operation in case of overtime), a key switch can be used to change over from program operation to controller operation. The controller continues working with the previously set temperature until the switch is activated again in order to continue with the program.

Documentation with NTLog

For process documentation, the H500-controls can be equipped with NTLog. For detailed description see page 28 - 29.

Documentation with NCC

The H700-controls can be supplemented with the Nabertherm Control Center Software (NCC) including PC. The NCC-controls provide for a convenient documentation of the melting operation with the following documentation options:

- All relevant data, such as furnace temperature, melt bath temperature, messages, etc. are always saved as a file each day
- The furnace is equipped with an additional start and stop button in a separate housing. When the button is pressed, the melt bath temperature is recorded separately and saved as a file. This enables customer charges to be analyzed and archived separately.
- The PC can also be used as a user interface with all the benefits of a computer
- NCC AA (Aviation and Automotive) for applications according to CQI9, AMS or NADCAP



User interface Control Center NCC based on PC

Additional Equipment for All Electrically Heated Melting Furnaces

Multi-Step Switch for Reduction of Connected Rating

A multi-step switch switches off a part of the heating depending on the power of the corresponding furnace model. Generally, the furnace can be operated at full load for melting. If the furnace is only used in holding mode the connected rating of the furnace can be reduced by turning off a defined part of the heating capacity, resulting in a significant cost advantage. As an option, this function can be automatically switched depending on temperature.

Power Management for Reduction of the Electrical Connection Value

If several crucible furnaces are used the installation of an intelligent power management can be the right choice. Monitoring all furnaces the power management is continuously reconciling the switch-on times of the heating. This effectively prevents all furnaces from switching-on at the same time. The positive impact is that the total connected rating provided by the energy provider can be significantly reduced.



Multi-Step Switch

Switchgear Cooling with Fans or Air-Conditioning

The switchgear of our furnaces is designed for environment temperatures of up to 40 °C. To secure a failure-free and long lasting operation of the switchgear in case of higher temperatures they can be equipped with active fan cooling or even with an air-conditioner.