STRECKER®

Overview of annealing processes

Why is annealing necessary?

Annealing is a part of the field of heat treatment and counts to the production processes related to change of material property. During electrical resistance buttwelding, hardening steels undergo a structural change in the heat-affected zone (HAZ). Applying a controlled annealing process in several stages (soft annealing) reduces the existing separations of cementite or pearlite and ensures the required material properties for the subsequent production process. Typical temperatures are 650 °C to 750 °C.

Which executions are available?

NV - Standard annealing device
Suitable for steel wire with low carbon content

LNV - Optional annealing device
Suitable for steel wire with carbon content of more than 0.5%. For steel wire, steel strands/ropes or prestressed concrete steel.

stepped clamping jaws - Welding and annealing at one level in the stepped part of especialy designed clamping jaws.

Manually controlled annealing

The operator presses a button until the annealing color is reached. This method depends on the experience of the operator and the lighting conditions at the workplace.

Manually controlled annealing with time relay

The operator presses a start button, the defined annealing temperature is controlled by an adjustable time relay.

Programmable annealing with control V30 smart

The annealing process is program-controlled. Performance values and times are stored in the programs to achieve repeatable annealing and welding results. This constantly evolving control offers the user high process reliability and intuitive ease of use.

Controlled annealing by pyrometer (starting with V30 smart / FPC)

The annealing temperature is measured via pyrometer and regulated according to a preset temperature curve. This special process is used when working with steels having extremely high quality requirements (starting at dias. > 0.5 mm).

Welding and annealing control V30 smart

The new generation of controls combines proven functionality with intuitive operator guidance using a rotary push button and a large 7 "display.

V30 smart features

- Intuitive menu navigation
- Fully downwardly compatible
- Import of existing welding programs
- Large 7" display
- USB / Ethernet connection
- External program selection
- Preheating for big diameters
- PDA interface

The integrated USB and Ethernet connections allow simple and quick exchange of welding programs between the individual controls. This ensures to easily archive, edit and manage the welding programs.

Existing welding programs from the predecessor controls can also be transferred.

Annealing can be carried out time-controlled in up to three segments. So even the most critical materials can be optimally treated. Optionally available with annealing by pyrometer (max. 5 segments), as well as graphical representation of the temperature in target / actual curves to ensure optimal process reliability in thermal post-treatment of high carbon steel or special alloys.

Control V30 smart can recognize and compensate voltage fluctuations of +/- 8%. The mains frequency is recognized automatically.

By assigning a password, certain areas can be protected against unauthorized access, e.g. changing welding/annealing parameters.

Conversion from V12 / V20 to the new V30 smart is easy, simply by replacing the control unit.

Free selection of welding program names enables the operator to use his companys' own designations: input alphanumeric and in [mm] or [in].

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