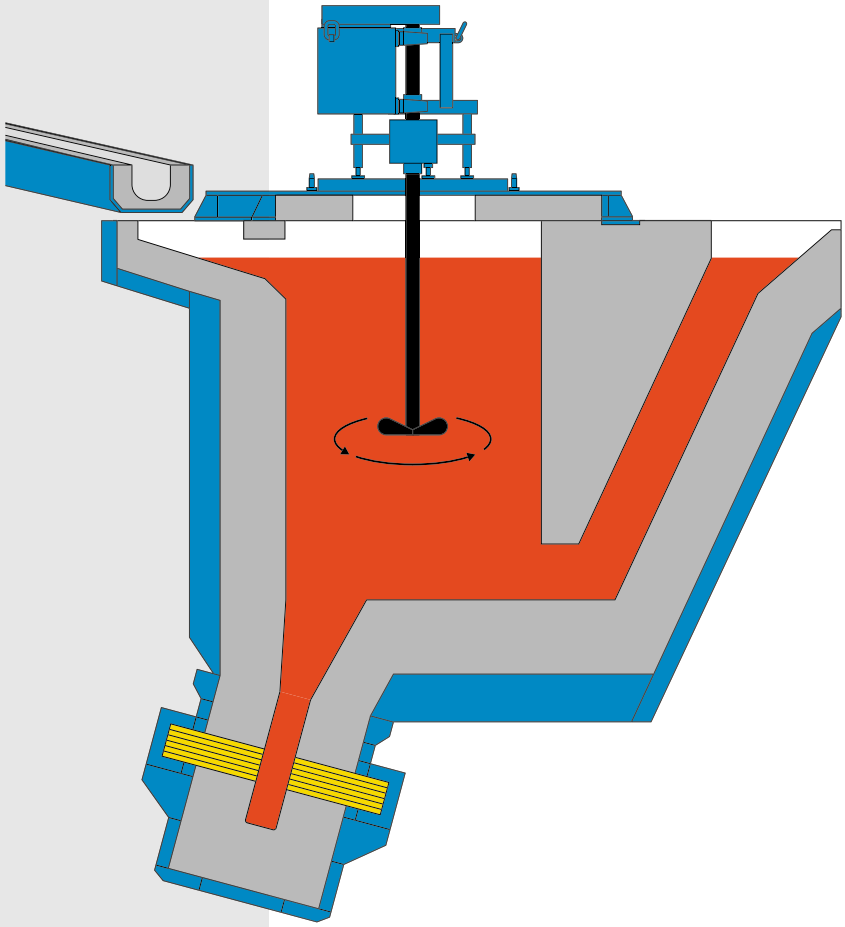
INDUGA

Zinc alloying furnace



The zinc alloying furnace is employed in the production of zinc alloys and feeds the ingot casting line or a holding furnace located upstream of the casting line. The induction heated and ceramic-lined furnace provides a melt with absolutely homogeneous temperature and alloy analysis for the casting of zinc ingots or zinc jumbos.

Thanks to its high electrical efficiency, good mixing properties and low emissions, the use of this furnace type has proved to be extremely effective in zinc alloying foundries.

INDUGA designs and supplies

- Channel-type induction furnaces for melting, holding and casting
- Coreless induction furnaces
- Furnaces for piece and strip galvanizing
- Automatic casting machines
- Ladle heating systems
- Low-pressure casting machines
- Plasma systems

Besides flexibility, our approach is typified by individual concepts and process-specific solutions that take account of both quality and efficiency aspects.

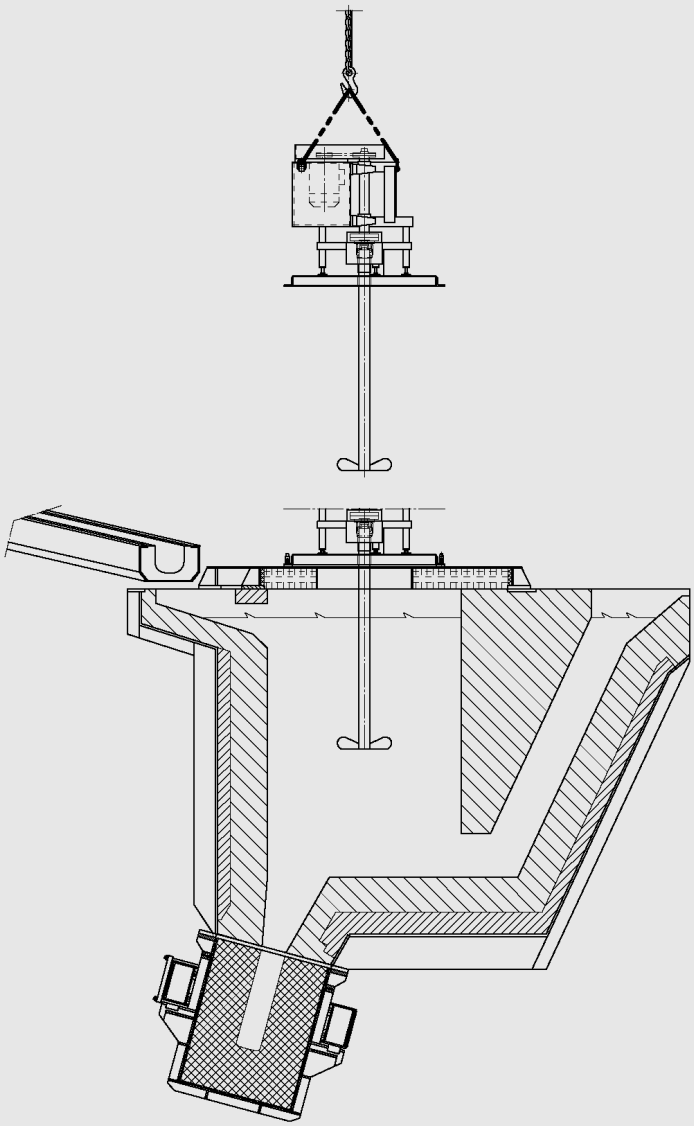
Production of zinc alloys in the induction furnace

The induction heated zinc alloying furnace consists of a ceramic-lined furnace vessel to which up to two channel-type inductors are flanged for heating. For optimum energy utilisation and to reduce radiation losses, the furnace has a large volume but a minimised bath surface area and is closed with a lid. An opening for a mechanical stirrer can be provided in this lid.

The alloying furnace is typically charged with liquid zinc from a cathode melting furnace and the alloying elements aluminium, copper, etc. are added in solid and/or premelted form. The composition of the charge can be monitored during the process by weighing the complete furnace vessel.

The production of homogeneous melts requires not only a controlled operating process but also an appropriate positioning of the inductors on the furnace vessel so that their stirring effect can be utilised for the process.
With critical alloys, this effect can be supplemented by a mechanical stirrer.

The channel-type induction furnace is generally tiltable, but can optionally be discharged by pressurisation of the furnace vessel.



Technical data

Design:	Channel-type induction furnace
Furnace type:	Stationary or hydraulically tiltable
Charging:	Continuous or discontinuous
Metal discharge:	Continuous with pump or by pressurisation, discontinuous by hydraulic tilting or by pressurisation
Number of inductors:	1 or 2
Inductor output:	up to 2 x 400 kW
Capacity:	approx. 1 – 20 tonnes of zinc
Bath temperature:	Continuous automatic control
Application:	Production and holding of zinc alloys

INDUGA
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INDUGA offers innovative metering and foundry installations together with expert utilization of proven induction technology.