



Magnesium Head Box MHB100E

Magnesium sheet casting MBG

The Magnesium sheet casting line MBG converts molten Magnesium alloys (i.e. AZ31HP) continuously into coils of magnesium sheets.

Design

- In a pit below floor level at the entry side of the caster are the Magnesium ingot prewarming and feeding unit MVE, the melting and holding furnace MDO and the casting furnace MGO located.
- A pump, which is installed inside the casting furnace, pumps the molten Magnesium by means of a heated transfer tube to the temperature controlled headbox, which is installed at the entrance of the caster.
- The headbox incorporates a level sensor, thermocouples and a pneumatically actuated plug.
- The level sensor provides feedback to the pump, which adjusts its speed to maintain a constant level in the headbox. When the correct level and temperature are reached in the headbox, the plug is opened and the molten magnesium is allowed to flow via a heated feedtube into a ceramic tip located between the rolls. This tip distributes the molten metal between the rolls of the machine.
- The width of the casted strip is determined and adjusted by the width of the tip.
- The headbox and feed tip are designed to work with a protective gas to avoid oxidation of the melt (gas supply and regulation by the furnace supplier).



RAUCH MAGNESIUM MBG

- The exit pressure at the tip is controlled by the melt level in the headbox. In case of malfunction, it also provides failsafe operation because the whole liquid Magnesium can be drained back into the furnace by gravity. There it is under control due to protective gassing.

