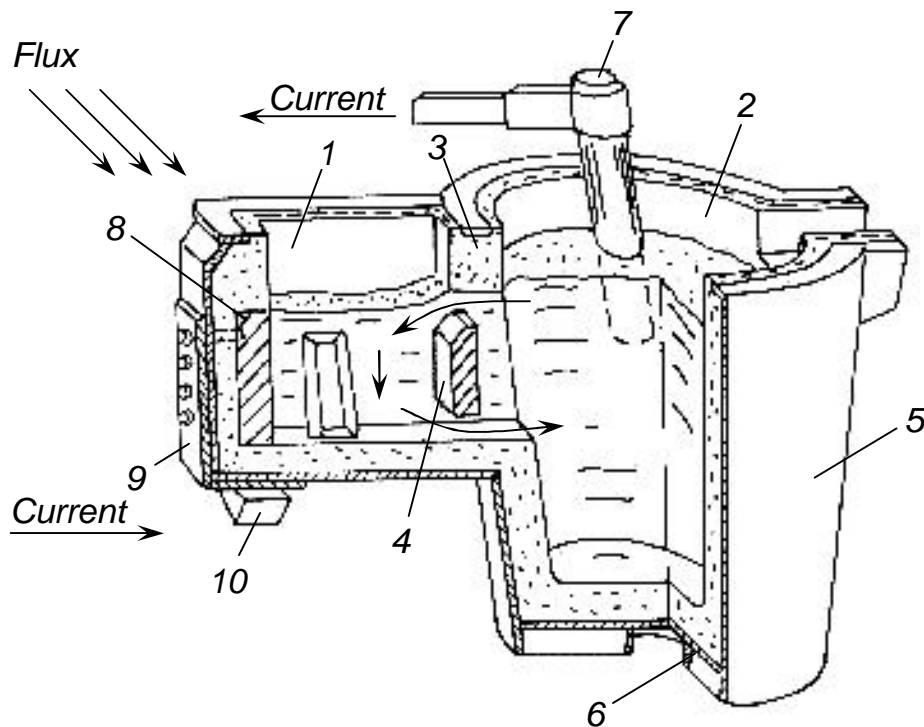


EMMG (method of electromagnetic control for gravitation)

Using magnesium in metallurgy is nowadays technically the MOST PERFECT method. It is due to the fact that magnesium is feeded in melt without any once-only facilities.

This method is ecologically the MOST SPARING: there is no pyroeffect, there is no air venting.

High degree of magnesium usage. The method consists in electromagnetic management of gravitational conditions in melt (EMMG), at which magnesium is immersed in metal (pig-iron, ferrosilicon) under the influence of electromagnetic force.



Reactor for electromagnetic input the additives into metal melt

1 – active zone; 2 – mixture zone; 3 – slag partition; 4 – regulated partition; 5 – metal structure of the ladle;
6 - bottom; 7 – input electrode; 8 – end electrode; 9 – drive line; 10 – current-collective device

EMMG application

- in pig-iron refining from sulfur by portions or in a cycle, and in pig-iron modification on spherical graphite (a degree of magnesium adoption is 80-86 %);
- in getting silicon-magnesium alloys from liquid ferrosilicium and of commodity pig magnesium (the given technology is implemented in Ferroalloys' Factory in Stakhanov. It is used to produce silicon-magnesium alloys in ladles for 3 cubes in a periodic duty. 50-60 magnesium ingots were having been loaded for 15-20 minutes without pyroeffect and at full magnesium adoption).

DonSTU has an experience of designing, chief - assembling of EMMG installations, and preparation of alloys.

The installation contains working space, power source, an electromagnet and service line units. Power consumption comprises 200-300 kW.

The Customer and DonSTU carry out jointly the development of drawings and plant manufacturing.