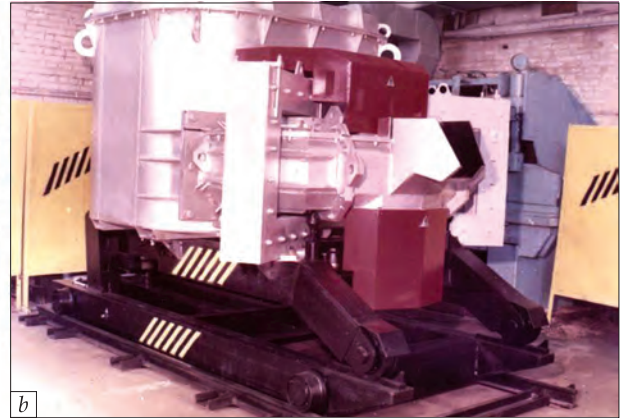


MHD-EQUIPMENT AND TECHNOLOGIES FOR PRODUCTION OF HIGH-QUALITY FERROUS AND NONFERROUS ALLOYS AND CASTS



Magnetodynamic mixing-and-batching devices for aluminum alloys (a) and for cast iron and steel (b)

Areas of Application

The equipment and technologies are designed to prepare and to pour ferrous and nonferrous alloys into molds, die casting machines, and continuous casting molds, to cast under electromagnetic pressure, to obtain metal suspensions for aluminum alloy rheocasting technologies, and to prepare “copper-chromium cast iron” alloys with the “frozen emulsion” structure

Advantages

The offered MHD-equipment has no direct analogs in the world. It enables intensifying the alloys preparation, reducing the energy consumption and waste of materials, removing impurities, refining the structure, improving the physical, mechanical, and operational properties of alloys, and automating the process

IPR Protection

IPR1, IPR2, IPR3

Specification

The magnetodynamic mixing-and-batching devices (for aluminum alloys with a melt capacity up to 630 kg and a power capacity up to 70 kW; for cast iron and steel with a melt capacity up to 10 tons and a power capacity up to 600 kW) provide out-of-furnace treatment and controlled electromagnetic casting of liquid alloys. The based on the action of pulsed magnetic field electromagnetic stirrer with a power capacity up to 40 kW stirs the melts in furnaces, mixers, ladles, and molds. The specialized MHD-devices provide obtainment of functional alloys

Stage of Development.

Suggestions for Commercialization

IRL7, TRL6

Customized manufacture, supply, after-sales service of equipment, technology mastering, and staff training, upon request. For the interested companies, organization of joint customized equipment manufacture and supply. Manufacture of small cast batches

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