Фізико-технологічний інститут металів та сплавів
Національної академії наук України
Physico-technological Institute of Metals and Alloys
National Academy of Sciences of Ukraine

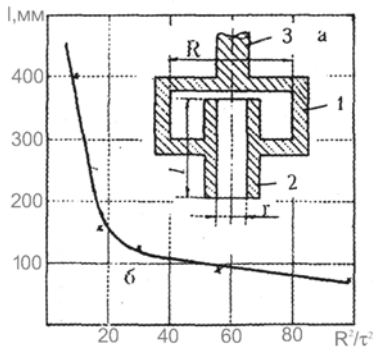
The technology and equipment for modification of cast iron with magnesium in the ladles

The technology is based on the maintenance of equality of magnesium pair mass consumption assimilated in the melt and manufactured in the evaporator.

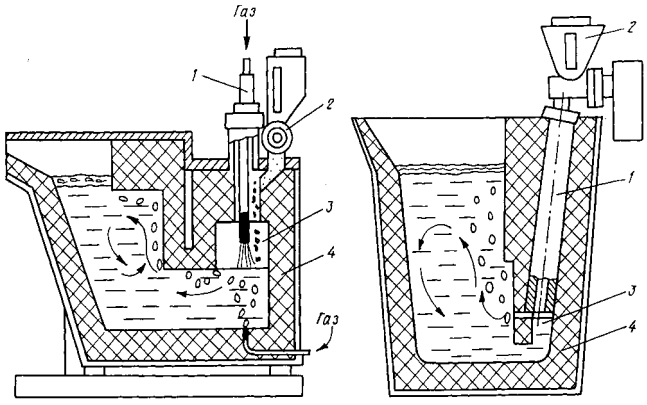
An occurs by the heat count of the very melt. The structure of heat transfering evaporator has three basic elementes: 1-evaporator chamber, 2-steam pipe, 3-diped in rod.

Magnesium placed in the evaporator chamber warms up to bouling by the account of heat inputing through the bottom and walls of evaporator.

The process is used for treatment of cast iron directly in the open forehearth of cupola furnace. Construction of evaporator is gauranteeing its repeated usage, fast stripping and recharge. The stage of magnesium assimilation is about 80-85%, the explosive interaction with melt is excluded, the high level of ecological compatibility is provided.



Scheme of heat-transpering graphite sapourer (a) and infer dependence of its constructional parameters(б)



Scheme of plasma device and equipment for treatment of cast iron:
1 - plsmotroane, 2 - batcher, 3 - evaporator chamber, 4 - ladle.

Please forward your proposals and suggestions to:
34/1 Vernadsky Avenue, 03680, Kiev-142, Ukraine, Physico-Technological Institute of Metals and Alloys of the National Academy of Sciences of Ukraine. Tel. (044) 444-35-15. Fax (044) 459-50-29. E-mail:metal@ptima.kiev.ua