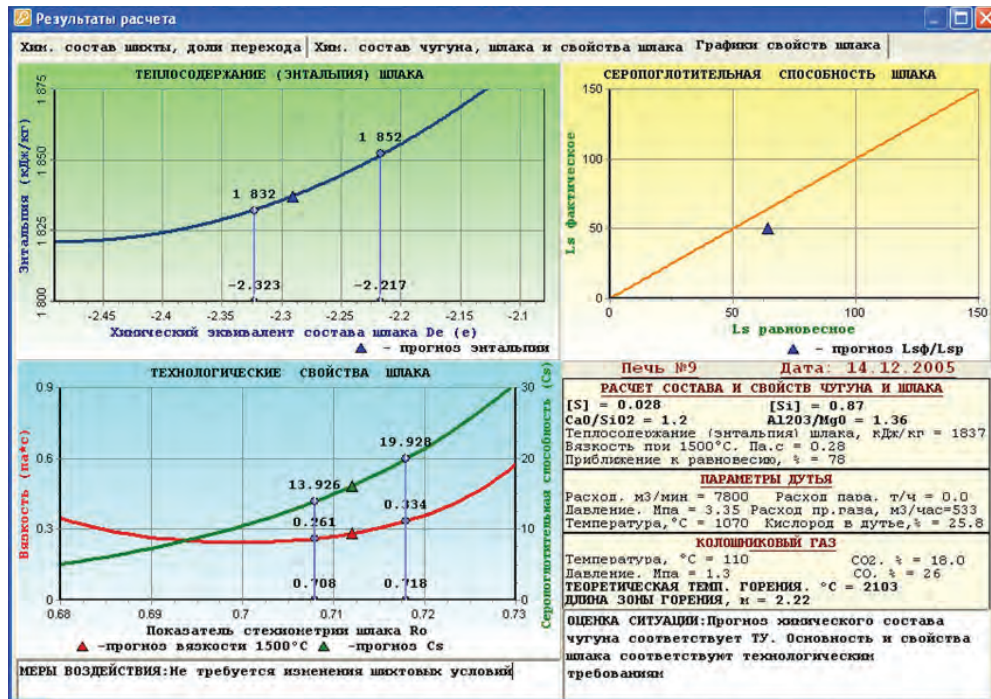# AUTOMATIC SYSTEM FOR CONTROL AND STABILIZATION OF BLAST SMELTING SLAG MODE

Picture of *Slag* system

Areas of Application

Used in metallurgy, for producing iron in blast furnaces

Advantages

The system is unparalleled.
It provides smelting conditioned iron
(with reduced fluctuations
of silicon and sulfur content in pig iron)
and reducing coke consumption
by 3—6 kg/t pig iron due to optimized
proportion of charge materials

Stage of Development. Suggestions for Commercialization

IRL8, TRL8
Installation, warranty service,
and staff training

Specification

The system includes: evaluation
of sulfur absorption, viscosity, temperature
at the beginning and at the end
of crystallization, specific heat at fluidity
temperature, surface tension both retrospective
and for specific cast; evaluation
of the crystallization ability and calculation
of the slag standard mineralogical composition;
control of the furnace thermal state based
on the blowing mode parameters (theoretical
combustion temperature, slag enthalpy, content
of silicon and carbon in pig iron); selection
of charging materials proceeding from predicted
composition and properties of pig iron and slag
based on charge properties and blowing mode
parameters. Implementation period: 3—6 months

IPR Protection

IPR3

Contact Information

Oleksii Ye. Merkulov, Iron and Steel Institute of Z.I. Nekrasov of the NAS of Ukraine;
+38 056 790 0515, e-mail: office.isi@nas.gov.ua