

chine. As a function of these values, pellet roasting is controlled along the conveyor machine. Before the thermal treatment of pellets starts, the following parameters are preset: composition and quantity of chemical elements in green pellets, the temperature and moisture of the pellet layer in technological area, granulometric composition, bulk mass, green pellet consumption, fuel type and its energy characteristics, etc. While thermal treatment of pellets, an express quality control of incoming green pellets and out-coming roasted pellets is done. Emission spectroscopy is applied to determine their chemical composition after their atom emission spectrum under excitation source (laser). This data is collected and processed. Laser excitation provides a high level of elemental analysis of pellet microelements using LIBS systems and Raman spectroscopy.

An important advantage of this method, as compared to other optical-spectral and many chemical and physical methods of analysis, is possible and accurate noncontact express and quantitative detection of a great number of elements within a wide concentration range.

References

1. Sposib keruvannya protsesom vypaliuvannya kotuniv na konveiernii mashyni [Control of pellet roasting on a conveyor machine]. Patent of Ukraine № 109810 кл. C22B 1/02(2006.01), G01N 21/00 [in Ukrainian].

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HISTORY OF VELYKA HLEYEVATKA DEPOSIT PROSPECTING

Geological prospecting at Velyka Hleyevatka Deposit was carried out from 1953 to 1975 in four phases. In the first phase, the geological prospecting performed by the Ukrainian Geological Trust of USSR Nonferrous Metallurgy Ministry a geological report including the calculation of reserves of ferruginous quartzite deposits was drafted and approved in 1953-1954.

The prospecting operations of the second phase were carried out

by Kryvbasheolohiia Holovgeolohiia Trust under the regulations of the former Soviet Republic legislation of December 15, 1959. in order to estimate the reserves of magnetite quartzites PR1sx2f, PR1sx4f ferruginous horizons. The main object of the deposit prospecting of that period were carbonate-magnetite quartzites PR1sx1f, PR1sx2f, PR1sx4f of the ferruginous horizons. The PR1sx5f ferruginous horizon was investigated together with the PR1sx4f. The result of the prospecting operation was the adoption of Protocol GKZ USSR No. 3825 as of January, 1962 the ferruginous quartzite reserves in such categories: unoxidized ferruginous quartzite of Category B – 186738 thousand tons, C1 – 1406420 thousand tons, oxidized ferruginous quartzites of Category B – 15472 thousand tons, C1 – 481236 thousand tons.

The third phase operations were organized in 1967-1968 by Kryvyi Rih Prospecting expedition aimed at further prospecting of the PR1sx2f, PR1sx4f, and partly PR1sx1f, PR1sx5f ferruginous horizons to a depth of 300 m within the 324-426 surveying axes. The results of this period of prospecting operations were outlined in the geological report including the calculation of ferruginous quartzite reserves of at the southern part of the deposit.

In 1970, based on the prospecting degree of the deposits, according to the objectives of the Ferrous Metallurgy Ministry of the USSR, the material composition of ferruginous quartzites was investigated and the evaluation of the raw materials for the approved conditions as of 1965 was held. Simultaneously, additional prospection design was drafted deposits within the 42-426 surveying axes to a depth of 500m from the surface making it the forth phase of the geological operations.

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INNOVATIONEN IN DEN LEHMBAUTECHNOLOGIEN

Von zentraler Bedeutung für das menschliche Wohlbefinden ist die Luftqualität in Gebäuden, demnach lohnt es sich, die Konstrukti-