

RKS-KM



Ore Control Station

Ore control station RKS-KM is used for control ore quality (specifying quantity contents of chemical elements in ore) in continuous technological cycle, (in a real time) on a conveyor belt.

RKS-KM is based on X-ray radiometric method. The source of primary roentgen radiation is X-ray

tube of shoot type. Registration of fluorescent radiation of chemical elements is implemented by means of semiconductor Si-pin detector. Then the percentage of chemical elements in control ore is calculating using spectral composition.

Software of RKS-KM make possible build automated systems for control ore quality of different industrial types: in Arctic branch establishment of public corporation «Norilsk Nikel» at the beginning of 2008 year we developed, assembled and put in commission a Control Ore Quality System. RKS-KM is ecological device.

There is an certificate of approval measuring tool RU.C.31.005.A;№31227.





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Arctic branch establishment of public corporation «Norilsk Nikel», mine «Oktyabrskiy»

Technical specifications of RKS-KM

| Nº | Parameter | Value |
|----|---|----------------------------|
| | · - 1 | |
| 1 | 2 | 3 |
| 1 | Quantity of simultaneously controlled elements | ≤ 5, according to ore kind |
| 2 | Range of registered elements with atomic number Z | from 20 (Ca) to 92 (U) |
| 3 | Range of specifying mass concentration of elements, % | from 0,1 to 80 |
| 4 | Minimum time of averaging measurements, sec | 30 |
| 5 | Distance between station and ore, mm | 300 ± 150 |
| 6 | Testing surface area on the conveyor belt, mm | 120 x 200 |
| 7 | Cyclicity of ore testing, sec | 30 |
| 8 | Connection interface | RS-485, isolated |
| 9 | Maximum length of connection line, m | 1000 |
| 10 | Quantity of electronic blocks, connected with control panel | 2 |
| 11 | Station work mode | continuous |
| 12 | Maximum time of setting work mode, min | 30 |
| 13 | Supply voltage of electronic block, V | 220 ± 20% |
| 14 | Power consumption of electronic block, kW | 0,15 |
| 15 | Supply voltage of control panel, V | 220 ± 20% |
| 16 | Power consumption of control panel, kW | 0,45 |
| 17 | Overall dimensions of electronic block, mm | 300x600x232 |
| 18 | Total mass of electronic block, kg | 30 |
| 19 | Overall dimensions of control panel, mm | depends on computer |
| 20 | Life time, years | 5 |
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