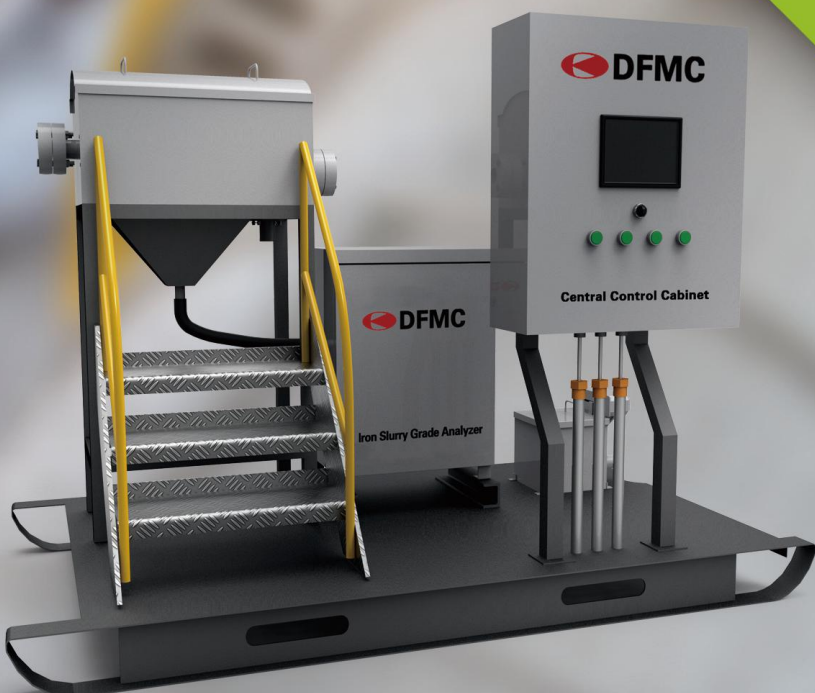


IGA-D

Iron Slurry Grade Analyzer

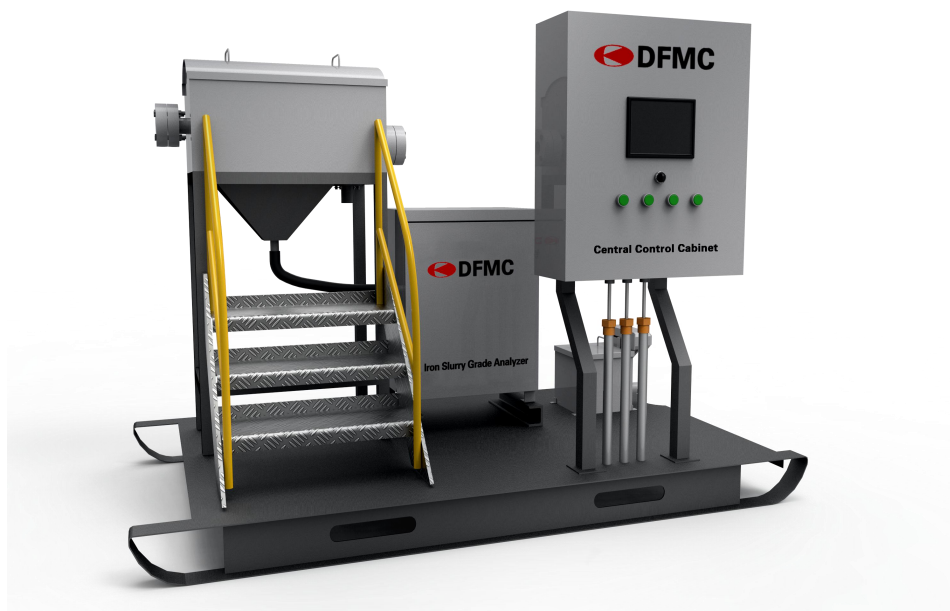


Iron Slurry Grade Analyzer (IGA-D)

I. Product Overview

Iron Slurry Grade Analyzer (IGA-D) is an instrument used for online real-time grade analysis of ferrum within slurry. The instrument adopts dual-energy γ -ray absorption method, it gets the iron grade through spectrum unfolding analysis on complex transmission spectrum generated during two kinds of gamma rays with different energies transmit the slurry.

IGA-D adopts single point detection. Small space usage enables easy installation. Its adaptability at working environment is strong which allows long-term stable and reliable operation and small maintenance workload. It can realize continuous and stable online iron grade detection which is suitable for ferrum content detection during ore processing process in steel enterprises. The instrument is applied for the grade detection of raw slurry directly; it can participate in and guide the automatic control of production process.



II. Product structure

IGA-D adopts the method of dual-energy γ -ray absorption. When the two different energy gamma rays penetrate the slurry, the ferrum will conduct characteristic absorption of either ray. The other energy ray allows for the detection of total solid amount in the slurry. The computer will unfold the complex transmission spectrum produced when dual energy rays through slurry to acquire the content of iron, sand and water in the slurry, and then the iron grade and the concentration are determined.

III. Technical Parameters

1) Dimension & Weight of the instrument

Net weight (Exclusive of IPC and sampler): 900kg

External dimension (L*W*H): 2200*1500*1700mm

Basic maintenance area: 3000*2500mm

2) Technical parameters

Detected parameter: iron grade

Measuring time: 1 second

Detected process technology types: raw ore, concentrate and tailing

Detected precision: typical precision 0.5 (1 δ), depends on the site condition.

3) Installation requirements

Installation space: not less than 2500*1500*2000mm

Flow rate requirement: 8-10 m³/h

Grounding requirement: resistance to ground < 4 Ω

Power supply requirement: 220VAC $\pm$ 10%, 50Hz $\pm$ 5%, 2KW

Wash water requirement: clean water with no suspended particle, 0.3MPa < Pressure < 0.5MPa

Gas requirement: clean and continuous gas, 0.4MPa < Pressure < 0.8MPa

IV. Applications of the product in mineral processing automatic control systems

- Real-time: Displays grade value every second so that the operator can know the production condition in time, enables rapid adjustment and avoid bad influence on product quality due to lagged chemical analysis
- Adaptability: Adopts single point measurement, main measuring unit can be installed in a whole or in disassembled parts according to the site condition. It has strong site adaptability.
- Low maintenance workload: Remote or local flush on pipeline can be achieved by installing automatic flushing device, thus to significantly reduce the workload of instrument maintenance.
- Radiation safety: Adopts scintillation detector with high sensitivity and efficiency, significantly reduces the dose of radioactive source and guarantees the radiation safety performance. Radiation dosage around the instrument is less than 2.5 μ Sv/h.
- Durability: Non-contact measuring method is adopted to ensure the long and stable operation of the instrument.
- Friendly operating interface, easy for operation.



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