

# LASER ONLINE ELEMENTAL ANALYZER

## FOR SORTING OF REFRACTORY MATERIALS



NO RADIATION

### CHALLENGE:

One of the world's leading manufacturers of refractory products suffered from significant variation in mineral composition of crushed magnesite ore. Lab samples taken manually every 2-4 hours were used to monitor the quality of the raw material. Current process couldn't satisfy increasing product quality requirements set by buyers. Besides, the manufacturer saw rising demand for premium grade products which could be sold at higher margins. Such conditions created a need for automated online crude ore sorting solution.

### SOLUTION:

To address this challenge cross-belt MAYA Laser Online Elemental Analyzer with SCADA controlled diverter was installed. MAYA analyzer was chosen for its:

- Reliable and accurate content data of MgO, CaO, SiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>.
- Clean, Radiation Free technology with no health and safety concerns to the personnel and environment.
- Low maintenance and operation cost

### ACHIEVEMENTS:

Fully automated grade sorting solution provided:

- Cost-effective production sorting process which allow to deliver required grade product to the customers. Additional streams of revenue were generated in producing premium quality products.
- Decrease of CO<sub>2</sub> emission and energy use was achieved by eliminating low-quality magnesite ore from the production.

# LYNCIS



#### INDUSTRY:

Refractories

#### TECHNOLOGICAL TASK:

Grade sorting

#### ANALYTICAL TASK:

MgO, SiO<sub>2</sub>, CaO, Fe<sub>2</sub>O<sub>3</sub>



#### FINANCIAL BENEFIT:

- **Additional earnings** from high-grade refractories due to extraction of additional 20% of high-quality ore
- **Elimination of penalties** for off-grade refractories due to rejection of poor-quality magnesite ore (up to 10% of total material)

#### PAYBACK OF INVESTEMENT

- **3 months**

#### ENVIRONMENTAL BENEFIT:

- Decreased CO<sub>2</sub> emission
- Decreased energy use
- No Gamma, Neutron, X-Ray Radiation

**“With MAYA Analyzer we can achieve our set objectives in sorting crude ore”** The Client

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