



# CARBON SULPHUR ANALYSER CO<sub>2</sub>/SO<sub>3</sub>



## ON LINE ANALYSIS ON:

- CEMENT TO QUANTIFY LIMESTONE AND GYPSUM ADDITIVES
- CLINKER TO CONTROL ITS SULPHUR RATE
- HOT MEAL TO CONTROL ITS CALCINATION DEGREE

High frequency measurement to optimise the relevant stage in the process

## ADVANTAGES

**Automatic on-line** equipment with integrated sample preparation, measurement and residues evacuation

Up to **3 sampling points** can be controlled by the same analyser

**Output** information used to **control cement mills additives** and thus **stabilize cement composition**

Possibility to use this equipment to **regulate the SO<sub>3</sub> rate in clinker** or the **calcination degree** of the **hot meal** at the optimum level

**Easy to install** either on site or in automated laboratory

## PRINCIPLE

- Custom designed sampling and transport systems
  - Sample homogenization
- Precise sample weighing with an electronic scale
- Cement / iron / tungsten mixing in a ceramic crucible
- Calcination at 1350 °C under O<sub>2</sub> flow in an induction furnace
  - Infra red calcination gas analysis
- Analog 4-20 mA outputs (Profibus communication also available) of limestone & gypsum rates to the grinding mill control unit
  - Automatic discharge of used crucibles

## PERFORMANCES

- **High frequency analysis** : up to **5 analysis / hour**
  - **No sample cross contamination**
  - Measurement range and repeatability:
    - C channel: **0 to 5 %**      $\sigma = 0,06$
    - S channel: **0 to 2 %**      $\sigma = 0,02$
  - **Other ranges available** upon request
  - Automated **crucibles (± 200) magazine**
- Automated **dedusting system** for sample residues
- **O<sub>2</sub> consumption**: 3 litres / min (during analysis)

## SPECIFICATIONS

- Height : 1800 mm     Power supply: any from 400 to 600 V; 50-60 Hz
- Depth : 910 mm     Compressed air supply: 6 bars, dry and clean
- Length : 2000 mm     Location: next to cement mill(s), cooler(s), precalciner(s) or in the laboratory
- Weight : 500 kg

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