

ON-LINE ASH-ANALYSER

Continuous evolution of electronic data processing in industrial processes along with optimisation opportunities require real-time information with high reproducibility. The logical consequence therefore is to transfer part of the laboratory nearest to the process.

To meet these requirements, we SCHMIDT+HAENSCH, specialized in manufacturing automatic laboratory systems for the Sugar Industry, using our knowhow and the friendly support of Saint Louis Sucre France, have and are developing automatic systems like the following Ash-Analyser.

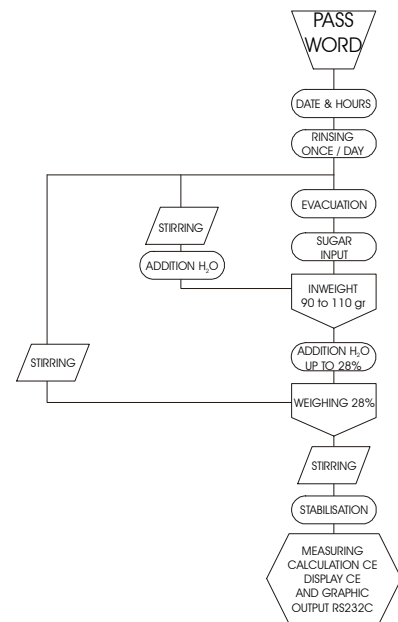
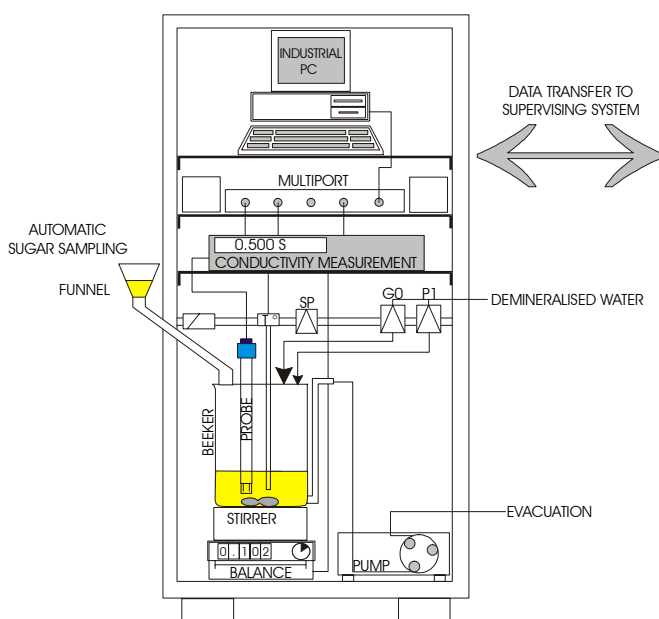
MEASURING PRINCIPLE

Knowing that high correlation between cristal sugar purity and ash content exists, we measure the conductivity.

With an automatic sampler a sugar sample (90 to 110 g) is taken from the belt, poured into a beaker placed on a balance for inweight, diluted with water (H₂O) to give a 28% BRUX solution and stirred to homogenise.

Next, conductivity and temperature are measured. Temperature correction to 20° C is obtained with coefficients or use of a kryostate.

The ash content is calculated via mathematical formula and the CEE points are obtained by simple correlation with the ash content.



TECHNICAL DATA

Power supply	220V AC
Display resolution	0,01 ash content
Precision ash content	±5% of laboratory value
Precision balance	±0,1 g
Precision conductivity	±0,5% on reading
Data output	±3 digits for range 4μS analog or digital (4 - 20mA, RS 232 C or others)

- Details:
- measurements every 6 minutes or more
 - automatic data storage
 - configurable software
 - working days configuration
 - 24 hours graphic display
 - display of measured values

Ref. 1) Zuckerindustrie / Sugar Industry 123 (1998) Nr. 7; page 527
2) IND. ALIM. 07/08 1998/51