

e-SILO

SOLUTIONS REVIEW #3

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Well established and proven solutions
from Branscan and TecnoCientifica

TEMPERATURE MONITORING

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Stop after-hours grain theft

RONIN REPORT

The future is bright right now

Ronin GMS

ON-LINE SOLUTIONS: POWDERSCAN

Quality and profit are primary motivators in any business and especially so for processors of raw materials such as millers. It is within these parameters that on-line systems excel. On-line systems offer the miller an fast, efficient and reliable method of measuring real-time contamination in powdered products such as flour. This is important because contamination is the determining factor of the final appearance, grade and purity of a product and thus ultimately the final selling price. In some cases contamination can result in the rejection of whole batches. By utilising an online system for quality control the risk of such costly occurrences can be mitigated. Ronin GMS offers on-line solutions from both Branscan and TecnoCientifica.



P4000 On-line solution: A reliable real-time online system for measuring contamination in powder products.

With the P4000 Branscan offers an online system for the identification of impurities in slurry, gel and powder products as part of the processing procedure. To date, Branscan have installed over 100 systems worldwide and operate 22 distributors over all five continents.

The P4000 system is configurable to operate 4 pneumatically activated measuring heads connected to individual control panels through one PC which screens can be remotely located. The system also comes with built in alarms that can be configured to suit the needs of individual customers. The P4000 system offers lights-out processing operation for 24/7 plant operation and its electrical power is located in its own independent control panel that is rated to IP66/67.

Powderscan and Fluoroscan are based on well established and proven image processing technology which has been used successfully within major manufacturers worldwide for nearly a decade.



Both the P&F4000 offers the following:

- Specially developed algorithm and lighting system means daily calibration is not required.
- Live image and processed image displayed on the screen allowing the user to see the sample analysed in real-time. All data can be archived and exported.
- Capable of scanning up to 5 separate criteria at once.
- Ability to measure number and percentage of impurities.
- Configurable to give measurements that operatives recognise and understand.
- Access codes can be employed to comply with regulations for equipment

- Casein
- Chemical Bead/Powder
- Gelatine
- Gluten
- Milk and Whey Powder
- Starch
- Semolina

Data can be displayed on the Powderscan software as both speck counts and speck percentages, as well as other data such as graphs. **es**

Powderscan P4000 online system provides data for a wide variety of products such as:

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ON-LINE SOLUTIONS: FLUOROSCAN



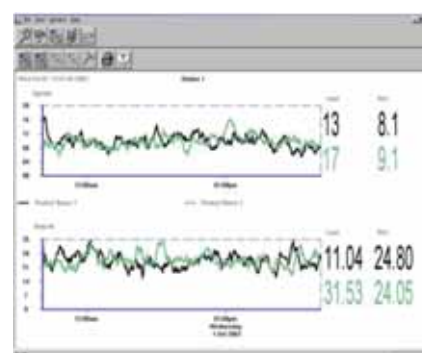
Aleurone, ash and bran are the determining factor of the final appearance, grade and purity of the product and ultimately the final selling price. In some cases impurities can result in the rejection of whole batches.

With the F4000 Branscan offers an online system for the identification of aleurone, ash and bran in flour products.

The Fluoroscan F4000 online system uses UV light to pick up the yellow specks of fluorescent aleurone, ash and the dark specks of bran in flour products such as:

- Semolina
- Rye
- Wheat
- Oat
- Barley

both aleurone, ash and bran counts and speck percentages, as well as further data such as the graphs below. **eS**



As with the Powderscan data can be displayed by the Fluoroscan software as

ONLINE SOLUTIONS: PROCESS NIR



Main Advantages

- Ample process information
- Automated operation
- Modular in design
- Versatility
- High stability
- Low maintenance
- No chemical residues
- Full historic database

Parameters Residual Percentage

Parameters	Residual	Percentage
Protein	<0,3	88%
	<0,4	92%
Oil Fat	<0,3	88%
	<0,4	92%
Moisture	<0,2	88%
	<0,4	92%
Fibre	<0,2	88%

Residual=NIR value - LAB value
Products: Soybean/Soybean Meal/High Protein Soybean Meal

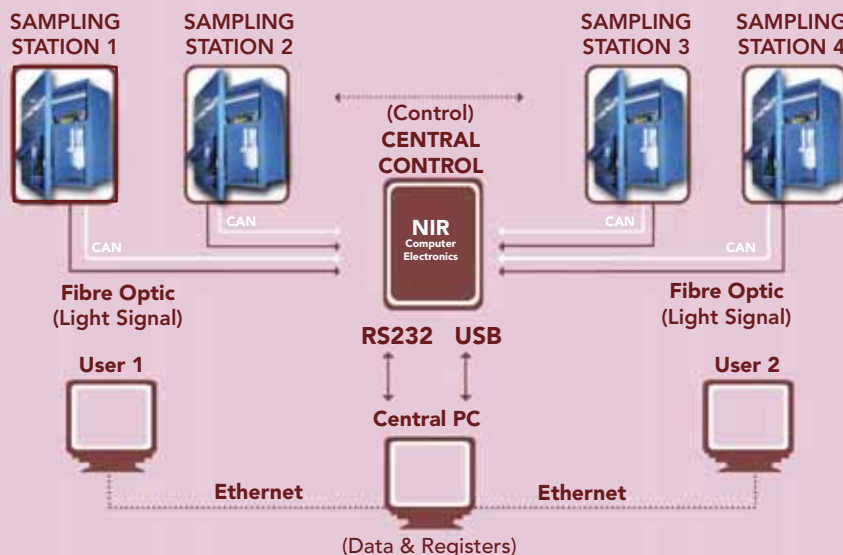


Tecnocientífica®

SYSTEM DESCRIPTION:

- Real Time Analysis of different kind of products
- Multiparameter and Multipoint System
- Remote Supervision by Ethernet or Internet
- Automatic Reference and Sampling Device
- Sensor to Control the Device Operations and Performance Remotely
- Exclusive Optical Sensor with NIR Light Source
- Maximum and Minimum Alarm Levels

Measurements and Communication



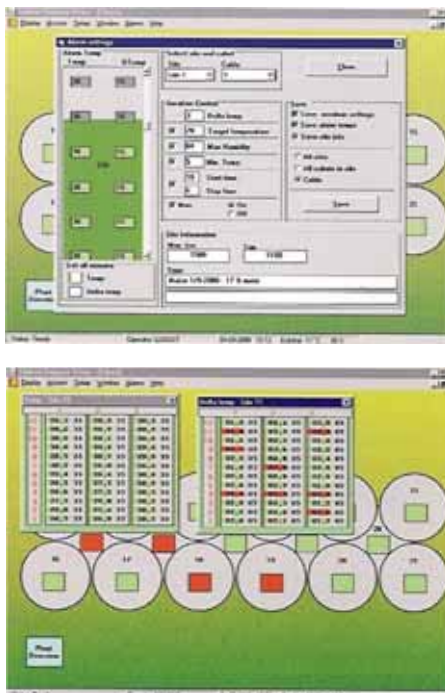
Ronin GMS

GRAIN TEMPERATURE CONTROL

Grain and seed handling requires the utmost care and efficiency. Cimbría has built a profound and market leading specialist know-how within development, production and supply of plants on turnkey basis including installation and training. Together with our thorough knowledge of crop handling and processing, the Cimbría Unigrain, Unitest 3000 (W) temperature monitoring system, contributes to a successful project implementation related to grain and seed.

WHY TEMPERATURE MONITORING?

Grain can be stored in many ways i.e. in silos or in flat stores. It is a common belief that the only threat to the stored grain are insects, impurities and rodents. This is only partly the truth because the real threat to stored grain are factors like moisture content, ambient temperature, ambient humidity, storage time and the grain temperature. If these parameters are not in balance, a reduction of the grain quality could occur and may result in severe damage to the grain. An essential factor for grain quality is the balance between water content and temperature. If one of these factors is too high the grain might start to "sweat". During "sweating" the grain will emit dry matter and water (loss of weight). In case the process is not stopped, the conditions in the silo or flat store will provide optimum condition for micro organisms, insects and other impurities. This could result in a self-perpetuating process destroying the grain even faster. With Cimbría's Temperature Monitoring System, the operator is able to act in time to prevent possible negative developments in the stored grain. Problems with the stored grain may be solved either by moving, drying or ventilating the grain. **es**



The new generation of Unitest® provides operators with many new and improved facilities in order to optimize the drying process, the fumigation and aeration costs, so loss of dry-matter, weight and unnecessary handling can be avoided. The software's unique facilities combined with the markets most reliable hardware are the best insurance for safe storage. Above can be seen the display of actual and delta temperatures, alarm set points and level.

The Unitest UT 3000W Software, which is the front end of the Cimbría Temperature Monitoring System, is used to measure temperature in grain silo bins for the safe storage of grain. The software works in the Windows environment. All systems and process data are saved in a database configured to each individual storage plant. The database structure makes it easy to organise, operate and maintain the data as well as exchange data with other computers using dynamic data exchange. A special version of the software contains an aeration control system which works in both manual and automatic modes. The system is available in two versions: Temperature Monitoring and Aeration Control.

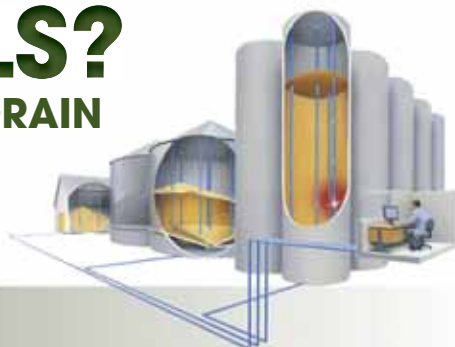
CIMBRIA TEMPERATURE MONITORING SYSTEM

HIGH ENERGY BILLS?

ELIMINATE UNNECESSARY MOVEMENT OF GRAIN

CIMBRIA UNITEST 3000W® MONITORS:

- GRAIN TEMPERATURE • STORAGE CONDITION STATISTICS



GIVING YOU:

- IN BIN AWARENESS • REDUCED INSURANCE • LESS BREAKAGES • LESS MAINTENANCE

CIMBRIA TEMPERATURE MONITORING SYSTEM



INFRARED CCTV CAMERAS



MOTION DETECTORS



SECURITY BEAMS



NO ESKOM POWER



SILENT SMS ALARM



HEAD OFFICE AWARENESS

STOP AFTER-HOURS GRAIN THEFT!

STOP after-hours grain theft with the Ronin **LOSS-STOP** Security Solution. **LOSS-STOP** is a Robust, reliable and cost effective system designed to operate unobtrusively in all weather conditions. The system has no visible cabling and operates independently from an external power supply. **LOSS-STOP** utilises infrared cameras and motion sensors placed at key points around the silo to ensure that your grain remains secure. The system is designed to interface with Ronin's Art software and thus offers head office awareness of after-hour movements of grain and will also send out a silent alarm whenever movement is detected at key point around the silo. Video recorded is instantly viewable online. **LOSS-STOP** can be installed within 4 to 5 working days. Contact Ronin GMS for a quotation and **STOP YOUR LOSSES** today.

