

e-SILO

SOLUTIONS REVIEW #4

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Ronin GMS

BRUINS: THE COMPANY AND THE MAN

Ronin GMS has been the sole distributor for BRUINS instruments (agricultural) in the Southern African region since 2004. We thought it high time that we tell you more about both BRUINS the company and Hans BRUINS the man.

THE COMPANY

BRUINS Instruments GmbH was founded in Munich in 1979 by Hans Joachim BRUINS. BRUINS Instruments produces research grade spectrophotometers famous for speed, sensitivity, and accuracy and supplies instruments to numerous research facilities for standards determination (such as the Max Planck Institute). In 1982, BRUINS Instruments delivered its first NIR analyser system for the agricultural and food industries. Since then, BRUINS Instruments has continued to expand and improve its line of analysers and as a result has delivered thousands of NIR and NIT analysers internationally.

THE MAN

Mr. BRUINS obtained his degree in electrical engineering from the Uni-

versity of Duisburg. He gained experience after graduating in a variety of disciplines including microscope imaging, biomedical instrumentation, laser spectroscopy, and optical spectroscopy. He currently holds over a dozen patents on spectrophotometer and sampling technology.

THE INSTRUMENTS

At the heart of all BRUINS NIR and NIT analysers is the BRUINS novel rapid scanning monochromator. The advanced technology incorporated in these devices have been developed and refined over the years to produce the most sensitive, stable and reliable instruments with the most reproducible results in the world.

With a heritage evolved from research grade spectrophotometers used in the most prestigious research institutes worldwide, these instruments are both simple and elegant in design.

While many have tried to copy the design, none have been able to approach the performance and stability of BRUINS instruments. BRUINS NIR and NIT analysers are so stable that they have

been known to run for over 5 years without a single adjustment. In addition, these are the only NIR and NIT systems where product calibrations can be transferred between the entire family of instruments without recalibration. BRUINS Instruments have also developed some of the most advanced sampling technology available providing reliable, reproducible measurements in all modes of operation including transmission or reflectance modes. A fully integrated self contained computer controls each instrument through an easy to use touch screen display. Specific models can also be used as research grade spectrometers by simply connecting a Keyboard, mouse and external display to run the full featured Microsoft Windows based Omega-Pro spectrometry software.

While BRUINS continues to innovate, you can always be assured that Ronin GMS you will always provide you with only the best service, products and support. Our technical staff are kept up to date with the latest developments in instrumentation and receive constant training on all our instruments including the BRUINS agricultural range of analysers. **es**

THE BEST OF BOTH WORLDS FULL NIT AND NIR (WITH LIMITED PREPARATION) WITH OPTIONAL BULK DENSITY DEVICE

AGRICHECK PLUS



Ronin GMS is the appointed distributors for the following brands in South Africa:

COST EFFECTIVE SOLUTION FOR GRAIN AND SEED ANALYSIS

*Precision NIR analyser for Agriculture, Food,
Chemical and Pharmaceutical Industries.
(Bulk Density Optional)*

The BRUINS AGRICHECK is perfect for whole grain and seed analysis including:

Corn, Soy, Rice, Wheat, Barley, etc.

*Universal calibrations are
available for protein,
moisture, fat, starch,
fibre, gluten
and sedimentation....*



RESEARCH GRADE PRECISION WITH INDUSTRIAL GRADE RELIABILITY

Ronin GMS

KERN 222: THE STANDARD IN HECTOLITRE WEIGHT

Improved methods for wheat and flour quality evaluation enables millers and bakers to more effectively assess quality, functionality and fitness of grain for particular end uses.

According to a recent report from the Campden and Chorleywood Food Research Association (CCFRA), the industry is continually seeking such improvements, either through the evaluation and modification of existing procedures and instrumentation, or through research into fundamentally new methods.

Recently developed new methods have included measuring hectolitre weight by using a one litre Kern 222 chondrometer, the Single Kernel characterisation System for determining grain hardness.

Hectolitre weight is a measure of grain density. Grain is poured into a container of known volume from a set height. The container fills with grain to a set level and is weighed. Hectolitre weight, expressed as kg/hl is calculated. High hectolitre weight is preferred and grain varieties must pass a cut off level before being classed as milling quality.

The Kern 222 is considered to be the most accurate method to measure hectolitre weight. Consisting of measuring tube, fore-runner and sharp-edge plate, auxiliary tube, filling cylinder and base plate.

Accurate and traceable, the Kern Chondrometer is the only choice for laboratories and in-take sites wishing to measure hectolitre weight to the full.

The Kern 222 can be ordered from Ronin GMS by contacting our sales department on +27 (0) 11 606 2194 or email us at office@roningms.com. **es**



PROPERTIES:

- Material: bronze.
- Scraper blade: stainless hardened steel.
- Weights: bronze and filled with lead.
- Axial: hardened steel.
- Bracket: agate bracket.
- Base plate with stainless lockingscrews.
- Support (1 Litre) consists of two pluggable tubes, on the top with agate bracket for the beam.
- Beam: centre distance and –height balanced of a exact μ -range.
- Advance body consists of tube, centrepiece and two panes. All together soldered, turned of exact height and a weight of exactly 89 +/- 1 gram (1 Litre).
- Scraper blade consists of three parts: holder, bronze frame and a blade.
- Capacity measure consists of soldered several single components (tube and solid matter).
- Counterweight consists of a baseplate, bracket, and a replacement ear.
- Recipient for bulk product consists of a bronzetube with a base and a reinforcement ring.
- Filling tube consist of a bronzetube with a „crown“.



Above: The Kern 222 in its various stages of assembly.

RAIN DAMAGE?



The RVA-Ezi is configured to measure pre-harvest rain damage in wheat and barley. It provides a simple 3-minute objective test for grain soundness at receipt or at the mill. Reports results in cP, SN (Stirring Number) or FNe (Falling Number equivalent).

RVA-Ezi

Ronin GMS

RONIN REPORT

In the short interum that has passed since the last e-Silo came your way we have been very busy indeed. A trip out to Mosambique resulted in the largest AIMS Audit that we have done to present and another trip out to Argentina saw the fruition of a project that has been in development for over two years. We also exhibited at the IUfost conference held in Cape Town.

MOSAMBIQUE (Ronin IS/GMS)

A team consisting out of Matt Brownson (GMS), Henco Smith (GMS), Paul Summerford (IS), Desmond Hayward (IS), Willie du Plessis (GMS), and Maruis Steyn (GMS) travelled up to Mosambique just over a month ago to survey the approx. 136 chrome stock piles located at Maputo harbour. The Survey, probably the largest we have done to date, was done over a period of only two consecutive nights. Bulk density sam-

ples were also obtained with the BDA* in order to ensure accurate result.

ARGENTINA (Ronin GMS)

Matt Brownson, Ferdie Meyer, Henco Smith and Leo Odendaal flew to Buenos Aires and travelled by land to Rozario to install our first Argentinian Artemis system into a large grain bunker (150m x 50m) located in the area. We installed 5 Artemis scanners and have been receiving excellent 3 dimensional point cloud scans on our side. This phase of the project has been a resounding success.

IUFOST (Ronin GMS)

Our marketing department consisting out of Ferdie Meyer, Edward Herridge and Munro v.d. Westhuizen travelled down to Cape town for the The 15th IUfost Congress held in South Africa this year from August 22-26 (2010).

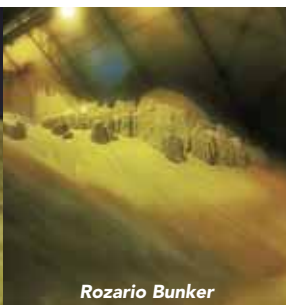
The focus of the conference and expo has always been that of the food sciences, a niche which Ronin GMS, and specifically our range of constituent analysis machines, fit into perfectly. Due to its high profile the expo was the perfect venue for Ronin GMS to elevate our brand and create awareness of our product range and services.

IAOM (Ronin GMS)

Ronin will be attending the international IAOM conference and expo, which is held in Cape Town from the 23rd to the 25th of November 2010. As with IUfost this confere moves all over the world and thus represent a very special opportunity for us to promote our company, our brand and our quality range of product. IAOM focuses mainly on millers and allied trades, a industry which already benefits greatly from our services and products. **es**



Maputo (BDA)



Rozario Bunker



Rozario (Artemis)



IUfost



IUfost

CIMBRIA TEMPERATURE MONITORING SYSTEM

HIGH ENERGY BILLS?

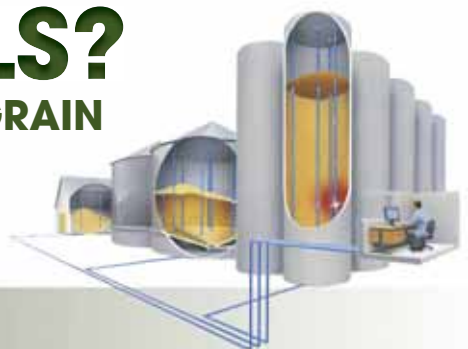
ELIMINATE UNNECESSARY MOVEMENT OF GRAIN

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

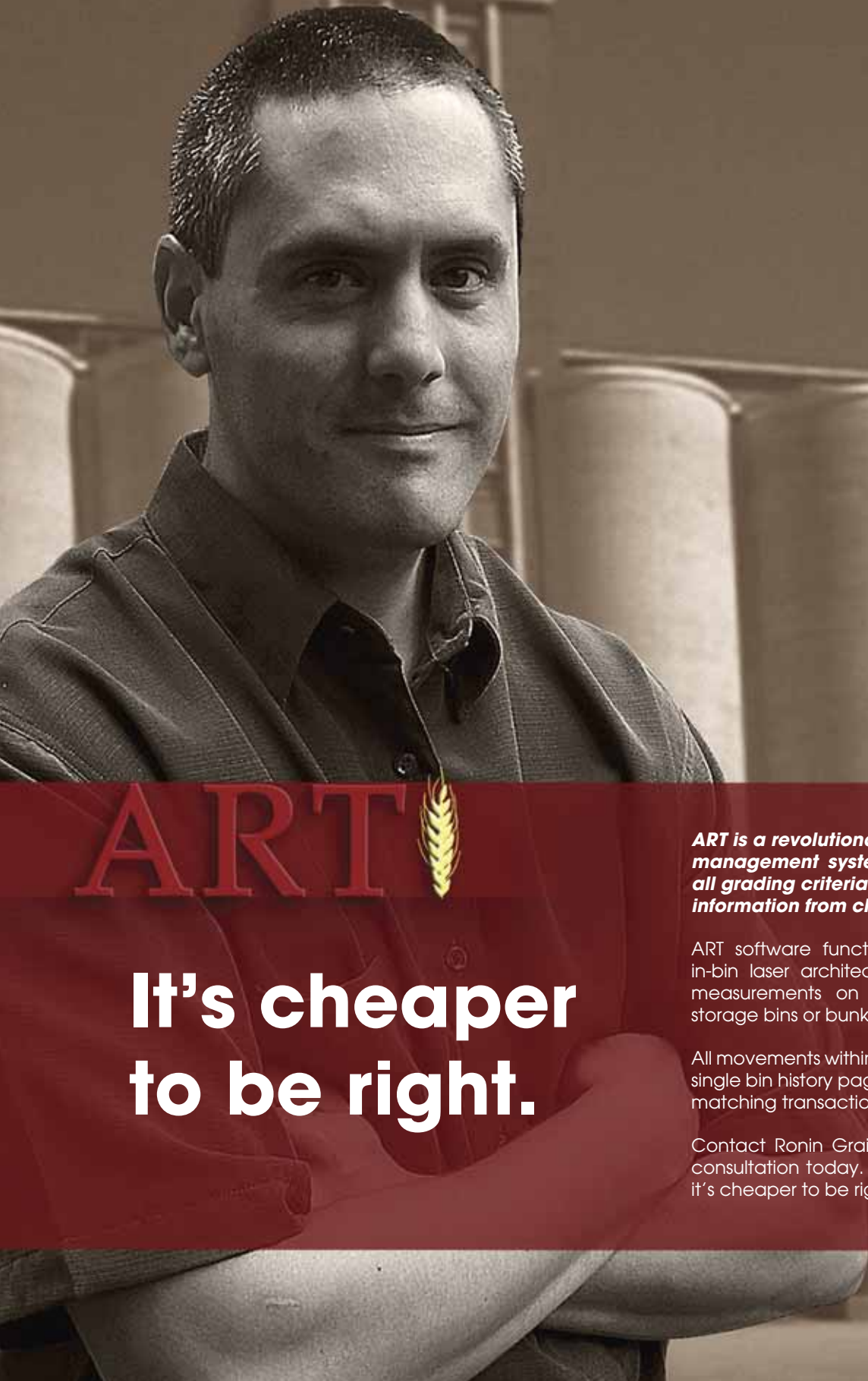
STOP AFTER-HOURS GRAIN THEFT!

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.



THE FINE ART OF INVENTORY MANAGEMENT

Ronin
Grain Management Solutions



ART

**It's cheaper
to be right.**

ART is a revolutionary independent stock management system developed to incorporate all grading criteria and daily transactional information from clients into a complete solution.

ART software functions as the front end to an in-bin laser architecture which provide continued measurements on stock levels inside the grain storage bins or bunkers.

All movements within storage bins are recorded on a single bin history page and compared daily with the matching transactions for the relative bin.

Contact Ronin Grain Management Solutions for a consultation today. Save time and money. Trust us, it's cheaper to be right.

Ronin GMS

SPATIAL IMAGING

ART Lite, ART, ART+, ARTEMIS and AIMS

ART Lite⁰, ART¹, ART+²: The Art system is the first independent stock management system of its kind and was developed to incorporate all grading criteria and daily transactional information from clients into a complete solution. The ART software functions as the front end to an in-bin laser architecture which provides continued measurements on stock levels inside the grain storage bins or bunkers. All movements within storage bins are recorded on a single bin history page and compared daily with the matching transactions for the relative vessel. This information is readily available to head office and easily distributable. ART+ differs to ART only in the manner in which the in-bin laser architecture operates. Standard ART has a STATIONARY laser scanner

and is suitable for smaller bins. ART+ has a SINGLE AXIS laser scanner and is suitable for larger bins. ART+ offers more accurate profile readings than ART's software generated profiles. ART Lite offers the same software functionality as both ART and ART+ but all measurements have to be taken manually and entered by an operator.

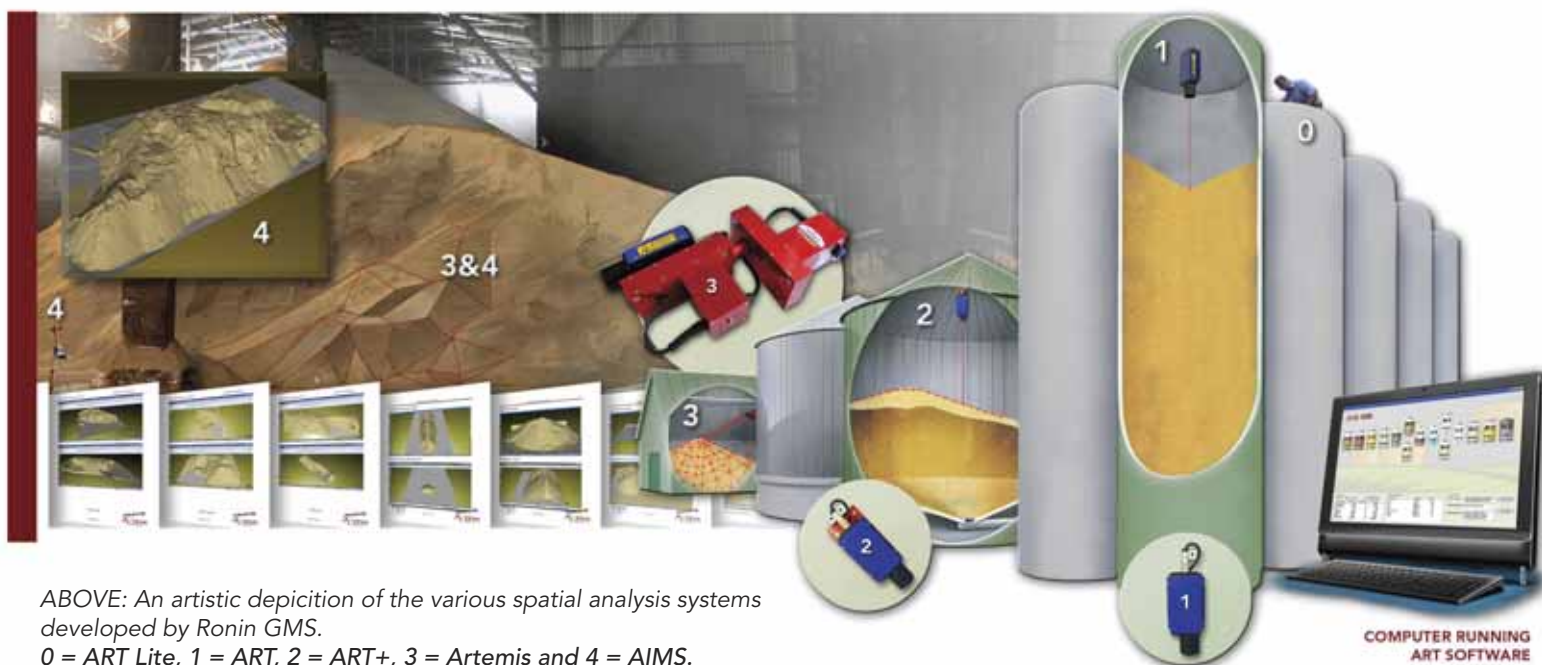
ARTEMIS³:

Ronin Grain Management Solutions has designed the Artemis laser scanning system to be able to scan large areas in grain bunkers and bulk handling warehouses. By using the Artemis MULTI AXIS scanning lasers we are able to create a three dimensional point cloud which is used to calculate the occupied volume inside of the storage bunker or

warehouse. All this captured data are then exported to the on-site Artemis computer where calculations and comparisons to book stock masses are made.

AIMS⁴:

The AIMS system is the revolutionary new system available for bulk quantity surveying of bunker silos, grain and commodity silos as well as open to air stockpiles. The system consists of a leveling tripod, The AIMS laser rig and the AIMS recorder software package. By utilising the AIMS system the operator can conduct moments in time audits, displacement audits as well as supply verification audits. These audits are of huge value to all bulk commodity handlers since ships, railway and road transport can be planned with greater ease. **es**



ABOVE: An artistic depiction of the various spatial analysis systems developed by Ronin GMS.

0 = ART Lite, 1 = ART, 2 = ART+, 3 = Artemis and 4 = AIMS.