

e-SILO

SOLUTIONS REVIEW #5

IN THIS ISSUE:

JENOPTIK

We have a look at the company that could one day be fitting the Imperial Star Destroyer with laser turrets

SPECIALISED LASER ARCHITECTURES

The hardware that makes our software shine

ART ALARM

After-hours loss control

RONIN REPORT

A general informal report

Ronin GMS

JENOPTIK: TURNING SCIENCE FICTION INTO SCIENCE FACT



Jenoptik laser sensors are integrated into each of our unique bulk commodity control solutions (ART, ART+ARTEMIS & AIMS) and have to date performed admirably within each laser scanning architecture. Due to our satisfaction with Jenoptik Lasers we are introducing the Jenoptik LDM41/42/43 & LDM301 laser sensors to the Southern African region this year.

As a comprehensive opto-electronics group, Jenoptik divides its activities into five divisions:

Optical Systems, Lasers & Material Processing, Industrial Metrology, Traffic Solutions and Defense & Civil Systems. Its customers around the world mainly include companies in the semiconductor and semiconductor equipment manufacturing industry, automotive and automotive supplier industry, medical technology, security and defense technology as well as the aviation industry.

The Group was created out of the former Kombinat VEB Carl Zeiss Jena in 1991, as a result of the German reunification. The Jenoptik Group headquarters are in Jena (Thuringia). In addition to several major sites in Germany Jenoptik is represented in nearly 70 countries and has production sites abroad in the USA, France and Switzerland as well as shareholdings in India, China, Korea and Japan. JENOPTIK AG is listed on the Frankfurt

Stock Exchange and included in the TecDax index.

Defense & Civil Systems

The Defense & Civil Systems division of Jenoptik focuses on the areas of military and civil vehicle, rail and aircraft equipment, drive and stabilization technology as well as energy systems. The service spectrum also includes opto-electronic instruments and systems for the security industry as well as software, measurement and control technology. In the field of laser- and infrared sensor systems the focus is on the development and production of laser distance measurement equipment as well as thermographic infrared camera systems designed to meet a wide range of applications.

Jena Production Site

The R&D, production and sales departments of the sensor systems product range is mainly located in Jena, the so-called "optical valley" of Thuringia, right in the heart of Germany.

Leading Technology by Tradition

Especially Jenoptik's expertise in development and production of laser rangefinders for various applications builds on more than 30 years of experience. Today Jenoptik ranks among the leading manufacturers of laser rangefinder technology worldwide.

Products and Technologies

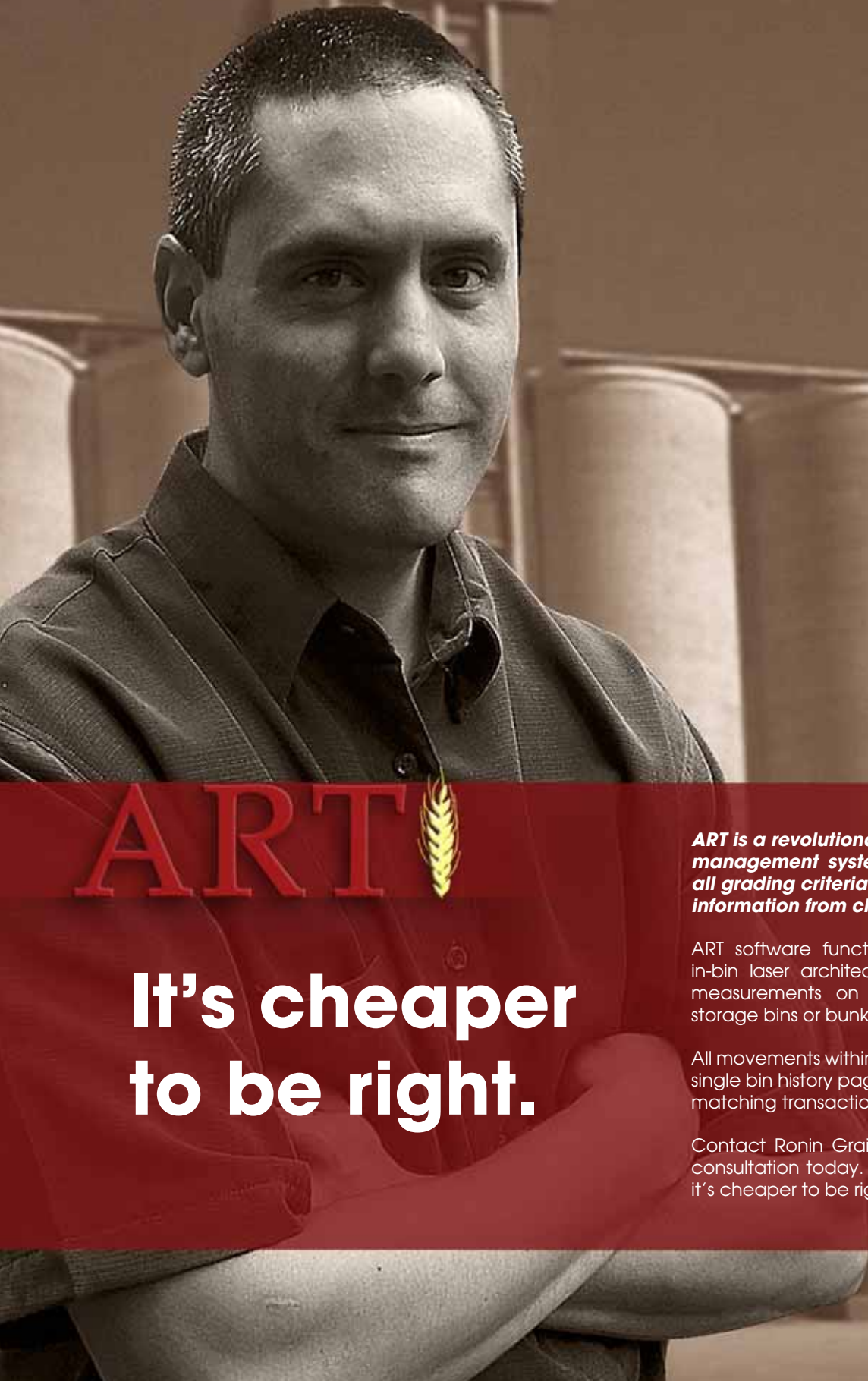
Jenoptik sensor product range encompass mainly laser and LIDAR sensors for non-contact measurement of distance, speed, and meteorologic parameters as well as infrared cameras and modules for two-dimensional temperature measurement and thermal imaging.

Among the innovative laser sensors for industrial distance measurement are the popular LDM41/42/43, LDM301 and LDM302 product families, covering a wide spectrum of ranges and target surfaces for non-reflector measurement with high accuracy. These are available through RoninGMS. Jenoptik's core know-how resides in the design, evaluation and definition of lasers, lenses, photo detectors and firmware that are combined to powerful and compact laser sensors based on either time-of-flight, phase comparison, or LIDAR principles. In addition to powerful standard products, we develop and produce specific individualized solutions and OEM products for system integration. What Jenoptik offers is a single-source combination of research and development, design, engineering and manufacturing services for small and large production lots.

For more information visit the Industrial Laser section of our website @ www.roningms.com

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

RONIN GMS SPECIALISED LASER ARCHITECTURES

Each of Ronin's laser architectures are the hardware counterparts to software solutions specifically developed to combat a problem that was originally perceived within the grain industry but has grown to include other industries as well. The problem I am talking about is the lack of control over bulk commodities. Without effective control over these commodities the risk of losing money becomes multiplied.

This is clearly not an acceptable situation. It is one that lies at the core of our company identity. We literally exist to combat this problem. The first of our solutions that was applied towards this end was ART. ART was the first system to deliver real-time stock level information, record keeping of bin content and head office awareness. It was the first system to offer the silo manager unparalleled control over grain volumes and quality. ART was the bomb we dropped on risk.

ART+ later evolved to service larger bins requiring millimetre accuracy. In small bins this is not critical and ART capably performs this job. Volumes are smaller and slight deviation from the profile would not translate into a meaningful differences. ART generates fairly accurate profiles by taking the shape of the bin and the flow dynamics of the bulk commodity contained into account within its calculations. With larger bins a small error in profile however translates into tons. The single axis architecture was the ideal solution to enable ART+ to trace profiles with millimetre accuracy. It is the missile that we launched straight into the headquarters of risk

The next level of scale we were confronted with was bunkers and warehouses. ARTEMIS was the solution that allowed us to deliver you control over these commodity stockpiles. This solution required a multi-axis in-bin architecture that was capable of a level of mobility that enabled the laser scanner to record data effectively. ARTEMIS software compiles all data gathered and generates an accurate 3 dimensional image of the stock pile within virtual space. This mathematical construct is used to calculate volume, bulk and stock mass. As with all our solutions, ARTEMIS records information gathered and offers head office awareness. With ARTEMIS we carpet bombed the enemy into submission. ARTEMIS and ART+ represents the next level of control over bulk commodities stored within Silo bins, bunkers and warehouses.

For commodities that are gathered in open-to-air stock piles we have developed AIMS. The AIMS solution is used to survey commodity stock piles, perform draught surveys and audits. This solution utilises the mobility of a human operator and an AIMS unit to perform audits. It offers us the accuracy of the sniper and the mobility of an infantry platoon. Reports reflect volume and mass of stock piles surveyed. Surveys are done at night in order to minimise impact on daily operations and represents our ground forces in the war against risk.

Our propriety solutions exist to ensure that you have complete control over the movement and volume of bulk commodity within your care. Get peace of mind and call RoninGMS today on +27 (0) 11 606 2194 to determine which solution will fit you.

Visit our website for more information and videos:

www.roninrms.com



ART+

ART+

Artemis
Laser Scanning System

Aims

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



INFRARED CCTV CAMERAS



MOTION DETECTORS



SECURITY BEAMS



24 HOUR BATTERY OPERATION



SILENT SMS ALARM



HEAD OFFICE AWARENESS

STOP AFTER-HOURS GRAIN THEFT!

STOP after-hours grain theft with the **Ronin ART-Alarm** Security Solution. **ART-Alarm** is a Robust, reliable and cost effective system designed to operate unobtrusively in all weather conditions. The system was developed to operate independently from external power supply for over 24 hours and utilises infrared cameras and motion sensors placed at key points around the silo to ensure that your grain remains secure. **ART-Alarm** 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.

Contact Ronin GMS for a quotation and STOP after-hour losses today.



Ronin GMS

RONIN GMS DEPLOYS ART-ALARM AT SILOS TO REDUCE AFTER-HOURS THEFT

Stock is the lifeblood for every grain handling facility. It is nurtured from when the seeds are planted, harvested, transported, accepted into a silo and even just before the final use of it in order to maximize quality and extraction. This is the reason behind the development of ART. From day one, when grain is accepted into a silo, this management system delivers daily reconciliations between physical stock and stock positions on the book. Unfortunately risk is not only limited to infestation, moisture, over cleaning or over drying but to theft as well.

Theft and security is one of the biggest problems currently experienced by grain silo owners. Silos were traditionally built in the areas where the most grain were received as well as strategic to railway lines and transport. Being in these remote locations is now the primary reason why grain silos are under threat.

Thieves have become more brazen and robberies happen in broad daylight. Cable theft as well as trucks arriving at night with gangs of armed men who threaten the life of the security on site are also prevalent. They want your grain. They want your copper cables and the reality is that no single security guard can stop them. Now is the time to respond. ART-Alarm is your solution.

While ART keeps an eye on what's happening inside the bins, ART-Alarm keeps an eye on what's happening on the grounds around them.

Art-Alarm is the latest Ronin solution that allows silo owners to utilise existing network infrastructure to communicate alarms over their internal network. At facilities where there is no internal network system we utilize GSM networks for alarming purposes. ART-Alarm offers the user the functionality to access recorded video footage on line and to react upon it instantly. Some focus areas includes intake offload bays, grain discharge points on road and rail, inside the operators office, weighbridges, railway and road gates, grading offices and in underground tunnels and exit doors at the end of them. A series of wireless beams, zoom cameras and PIR sensors are available to build a viable solution. Alarms are communicated via SMS and can be set and managed remotely by using SMS's. All alarms and videos are recorded on site for future reference and a networked head office pc forms the front end of the system displaying all sites, all camera footage and alarm history. Art- Alarm is already operational country wide.

Keep thieves off your premises and your stock in the bin with RoninGMS's ART-Alarm solution.



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



I have just returned from the GOSA conference which was held on the 9th & 10th of this month at Kiewits Kroon in Pretoria. From a branding point of view this was a very successful GOSA for us this year. Ronin has been involved with GOSA for many years and this year we elevated our sponsorship status to that of diamond, of which there were only 2 other contributors, RMB & Senwes.

NAMPO is just around the corner as well. As per usual RoninPFS will be in attendance. Come around to the stall for a quick look. PFS has added two new systems to their line up. These are the Weedseeker and Greenseeker systems. Trimble also has a new screen to show off.

RoninIS has obtained ISO certification, which is no small deal. This positions the independent surveyors on a pedestal occupied only by those who maintain exacting international standards. They are also revamping their

web site and it will be up and running very soon. Matt Brownson, Managing Director of Ronin, recently visited Mexico along with Lars Rægård Jensen from CIMBRIA (Denmark). CIMBRIA specialises in temperature control of grains in storage. They are there to market IMS and CIMBRIA temperature control. IMS is ART, ARTEMIS and AIMS combined, re-branded and integrated into the CIMBRIA system. IMS is marketed mainly in eastern and western Europe.

And finally, welcome back Jaco Viviers. Jaco worked at RoninPFS a few years

ago and now has returned as Branch Manager of the North West Province for RoninPFS. Good luck Jaco.

And that is just about all the news I can muster for this edition of e-Silo. Please check out our web sites for back issues of this electronic magazine and while you are there, why not check around? We are going to be running a competition on the GMS web site so keep your eyes open. It will appear as a link on the top right hand corner of the page

www.roningms.com

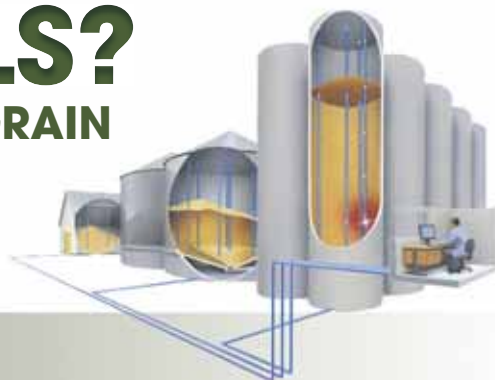
CIMBRIA TEMPERATURE MONITORING SYSTEM

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