

AUTOMATION& ELECTRONICS

Precise Control
International Systems Integrators

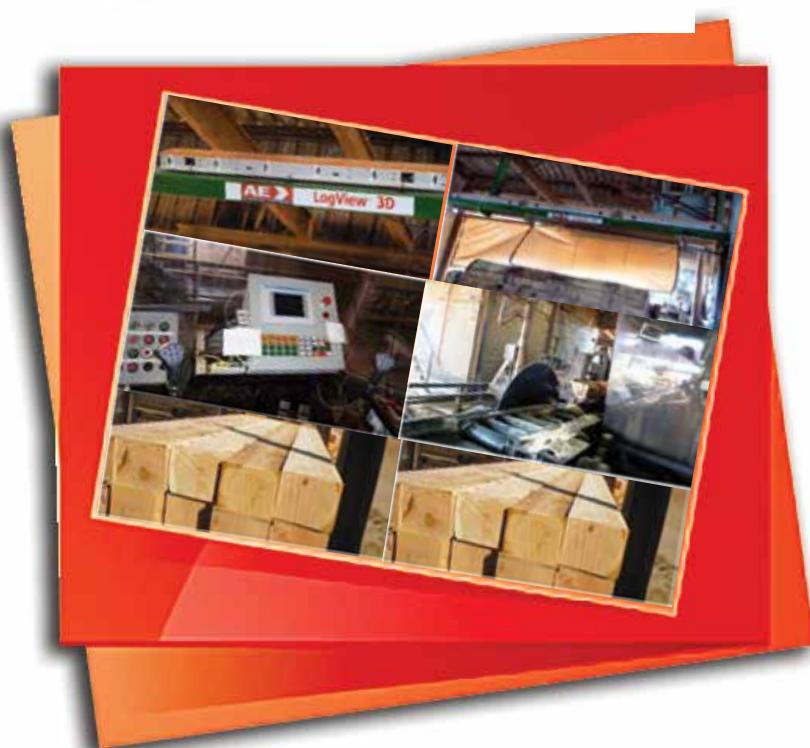
Newsletter Volume 1-2013



Sorrells Lumber Co Control Systems Upgrade



Above: Carriage in workshop ready for install.



Sorrells Lumber Co is a hardwood sawmill owned by Chad Sorrell & Family in Sparkman Arkansas.

Their primary product is high volume dimensioned railway ties . The Carriage & Circular saw combination on-site had a proprietary made controls system which was no longer supported.

A&E's solution was to install a PLC based control system using Allen Bradley ControlLogix PLC combined with Delta Servo control integrated to AE LogView 3D Carriage Optimizer.

The Optimizer provides faster Scan & Set capability along with more consistent BOF (Best Opening Face) Solutions ensuring the target dimension Cant is produced every time whilst minimizing waste and gaining the highest achievable outside boards from each log.

The installation went smoothly aside from a small hiccup with a PC which was replaced promptly by ScanMeg Inc. Commissioning was carried out over just a few days and the online remote broadband support enables A&E to keep an eye on the system 24hrs /7 at both ends of the Globe.

See Us At Following

SFPA Expo 2013
June 5th - 7th
Atlanta, USA

Wood Expo 2013
September 3rd - 5th
Albury, Australia

Wood Expo 2013
September 11th - 13th
Rotorua, New Zealand

A&E EXPO STANDS



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Wagner Hardwood

Silvatech Edger/Resaw Upgrade



"We have great respect for
Dave Gregg's abilities &
we like the product"

Wagner Hardwoods
Bruce Richards.



A&E Engineer – Dave Gregg

From an engineers viewpoint, Dave explains the project: "At Wagner Hardwoods L.L.C. Cayuta N.Y. an Allen Bradley PLC and the Delta RMC (Motion controller) were used to replace the existing Silvatech system". "We were able to re-use a number of components including the existing panel (into which the PLC and RMC were mounted), the push button panels and the VFD (replaced the reversing motor contactor) was mounted in the motor control panel". "Panelviews replaced the Silvatech monitors and were installed in a compact standalone enclosure".

"By upgrading the existing Silvatech system it has made the edger motion controls proportional and includes the benefit of some real time reporting (total cuts this shift, total cuts per minute this shift, and current shift downtime and past shift report of these)".

"The original system was a working system that the customer was happy with (20 years +) and initially it was replaced in order to prevent the future problems of running an obsolete system (Silvatech) with limited support".

Bruce Richards from Wagner's comments on the project as follows:

"We replaced an existing Silvatech networks that served both a vertical linebar resaw and a horizontal edger".

"We thought that, as a replacement, the networks looked like something we could live with and we were predisposed to deal with Dave Gregg, because we have great respect for his abilities, he is very familiar with our mills, and how we operate".

"The system is probably a bit more sophisticated than was needed to do the job, but service after sale is extremely important to us. We like the product and will consider it to replace out the Silvatech's (8 in total) as they become obsolete".



West Frazer - Joyce Mill Louisiana USA

PROJECT: Dryspec Continuous Kiln



"Recently, A&E supplied, installed and commissioned a Dryspec CDK (continuous drying kiln) controls and management system for us onto a KDS Windsor steam heated CDK at the West Fraser facility in Joyce, Louisiana, USA", said Keith.

"Apart from controlling and monitoring operation of the CDK, the Dryspec CDK package is also integrated into the in-CDK moisture measuring system DryTrack Echo", he stated.



Comment by Windsor International Representative, Keith Robertson.

Stuart Timber - Tapanui West Otago

PROJECT: Replaced two existing "older" kilns with two Windsor "Classic" 6 metre Kilns together with "Kilnwatch 2000" software from Automation & Electronics.



"We knew it was time to upgrade as the existing kilns were running up some fairly high maintenance and running costs and the quality was inconsistent," states Roger. "Looking around, we knew that Windsor has a good name and liked the New Zealand option as it incorporates good backup", he says. "We had used Automation & Electronics before on a setworks for log carriage for our mill previously, and, as they frequently work with Windsor, it made sense to use their expertise and software on this occasion" Roger says.

Roger's final words on the subject - "We are happy with our kiln choice and find the software straightforward and extremely easy to use, there is little training required for the operator and it has a number of useful features".



Waitete Sawmill Te Kuiti

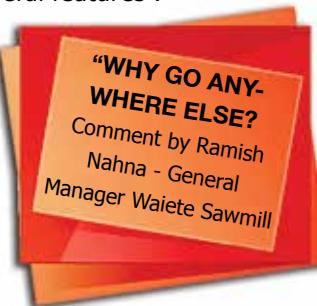
PROJECT: Replaced Jaymor Setworks with new A&E PLC based control and new operator interface (Allen Bradley & Delta servo positioning).

A&E Engineer: Richard Baker

Dependability and low maintenance – 2 vital elements in any sawmill – "At Waitete, the setworks for resaw was an old Jaymor unit which was no longer reliable, so, the upgrade naturally went to A&E", says Ramish Nahna.

Ramish's overall impression – A&E were excellent, the upgrade went without a hitch, the product is good, the gear is reliable, why go elsewhere?" he says.

"We are trying to put all our electronics through A&E now where the decision is ours", he states.



A&E NEW product update

AUTOMATION & ELECTRONICS ARE NOW THE DISTRIBUTORS FOR RENS METAL DETECTORS IN AUSTRALASIA



METAL DETECTORS

READY TO REDUCE TRAMP METAL DAMAGE TO YOUR MILL?

Rens Conveyor Line Search Coils Are All Shielded To Help Prevent Outside Interference And The Surround And "U" Shaped Log Scanning Coils Are Entirely Fiber Glassed For Weatherproofing.



< UNDER CONVEYOR



WHOLE LOG & CANT >

WHEN METAL IS YOUR ENEMY, A RENS METAL DETECTOR IS YOUR DEFENSE

The RENS Metal Detectors have proven themselves in hundreds of installations in the United States, Canada, and in other countries, and can detect both ferrous and non-ferrous metals in a range of applications. Built initially for the timber industry these can be applied to any bulk material handling process that needs to detect metal in the material being handled. For example stock feed lots such as Palm kernel, which can arrive off the ship with bits of bulldozer teeth and shattered bearing housings, can use a RENS Metal Detector to protect the downstream machinery.

Common applications in the timber industry are whole log and cant scanning and on the chipper in-feed conveyor belt. This is where a costly and dangerous accident can occur if a stray piece of tramp metal, either loose or embedded in the timber, hits the blades. You only need to prevent one spanner going into the chipper blades for the RENS metal detector to pay for itself.

In this day and age most forests around the world have been cut down and regrown multiple times and people have left a lot of metal in these forests, whether it is old tools, parts of barb wire fences, blades, bullets, spikes, etc. When a sapling begins to grow around metal it will incorporate that metal inside its' trunk much like the cartilage which will form round an object in a human body. I've been told of a case in America where a tree has grown around a Ford Model - T transmission, but obviously that's extreme.

Timber mill operations are a tightly coupled system of interconnected processes connected by conveyor systems. If one part of the process fails then the entire system is compromised causing loss of production, time, and money. By placing a RENS Metal Detector at strategic points in the process, costly downtime and injuries can be avoided.

Questions to consider when selecting a metal detector:

What is the belt speed? A belt speed of 30 – 262 metres per minute gives consistent results; It this for whole logs, cants, wide, flat, or loose material. RENS Search coils come in different configurations and sizes, from surround to under belt systems to keep your production line running.

What is the height and width of the material being scanned? What is the width, depth, and profile of the conveyor belt?

What is the smallest size metal the needs to detected?

The A10-30 Search Coil on a 765mm wide conveyor will detect a 25mm steel ball at 465mm height; Is the belt vulcanised or joined by metal staples. The belt must be vulcanised as the metal staples would trigger the metal detection control circuit.

RENS Metal Detectors need a metal free zone to work accurately. We can supply a 1.8 metre long fibreglass trough, that replaces a section of the conveyor belt system. These are flanged for easy installation and protected from belt abrasion by a sheet of Ultra High Molecular Weight Polyethylene.

If you need a metal detector to protect your process from tramp metal, or are you considering replacing your old, out of support, or damaged metal detector, call us for a friendly, fast, and competitive quote.

CHH Whangarei - NZ

PROJECT: Optimizer Edger Upgrade

A&E Engineer: Rainer Ansorge



< Operator console

Siemens Delta PLC Controls>



JoeScan laser >
sensors



**"All In All A
Well Executed
Project"**

Comment by Ross Cook
Mill Manager

This replaced the existing Nelson Bros Optimizer & Scanner and old AB PLC controls. The Upgrade included a new A&E IRIS Edger Optimiser Software, installation of a new JoeScan lineal scanners (x 6) and Siemens S7 PLC with Delta servo control (20 plus boards per minute - Radiata pine) lineal scan with Slewing saws.

Ross Cook Mill Manager comments on the project as follows:

"A&E replaced our existing Board edger Scanning and optimization system, including PLC controls on our Auto-pos Edger".

'When we started this looking at this upgrade project we contacted a number of Automation companies and found A&E where able to

provide us with the complete package at a reasonable rate." States Ross. "The key reason for the upgrade was reliability of the system and all the information around JoeScan suggests this system is very reliable". Ross says that he believes that Installation went to plan with few hiccups and flexibility to make changes to suit out operation where discussed, agreed and implemented in a timely manner.

... and the lasting impression? "All in All a well executed project" says Ross.

Auswest Timbers - Pemberton Sawmill - Western Australia

PROJECT: New Edger Controls with EdgerView

"A&E have very recently completed an electrical upgrade on our McKee Small Log line Edger, replacing an old obsolete PLC 2 system to RSLogix and replacing old laser technology with an A&E EdgerView system, new Transducers with Bosch valves" says Steve.

He states that the upgrade now gives them the ability to cut sizes accurately and provides much needed software backup.

Steve says that "A&E were recommended by Gibson who are installing a new Edger into another mill belonging to Auswest Timbers, A&E were brought in there to do the electronics so it was decided to use their expertise to upgrade our Edger giving both sites the same technology and software back up".

At time of writing, Steve said that installation had only having been completed three weeks ago and had not yet allowed them to fully ascertain back up service with connection only available since last Friday. He stated that the upgrade had certainly improved performance of this unit and that A&E were extremely professional with their installation.

**"A&E WERE
EXTREMELY
PROFESSIONAL
WITH THEIR
INSTALLATION"**

Comment by Steve Fisher,
Operations Manager, at
Auswest Timbers.



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NEW WEBSITE FACILITY

NEW ZEALAND CLIENTS ONLY

Richmond Valley Water Treatment Plant - AUSTRALIA

PROJECT: Upgrade electrical and control systems



The Richmond Valley Council recently engaged Automation & Electronics to upgrade the electrical and control systems at their main Water Treatment plant located at Casino, in northern New South Wales. The plant is supplied by untreated water from the Richmond River by the Raw Water Pump Station, and treats this water using a combination of chemical dosing and filtering, which provides potable water for the town of Casino and environs.

The plant was originally constructed in 1985 as a joint project between the NSW Department of Works and Water Treatment Australia Pty Ltd. The original control system was a combination of a Central Process Logic Controller housed in a Central Control Panel, a RadTel RTU system, and two smaller PLCs controlling the Fluoride and Chlorine dosing



New ClearSCADA cabinet

The original PLC and RadTel functionality was replaced with state of the art Omron hardware in new cabinets and SCADAPaks for remote telemetry. All the existing electrical cabling and switchboards required for the original Central Control Panel was removed where required. New cabling was run where necessary for the cabinet relocation, and original flooring re-instated.



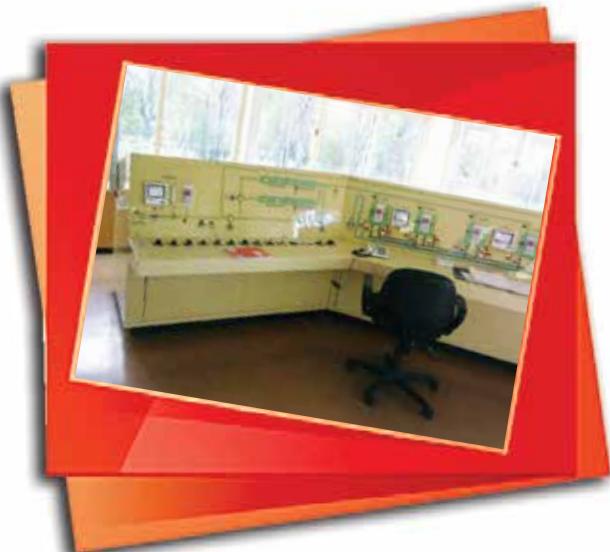
New PLC and Marshalling Cabinets

The Operations Engineer for Water and Sewer Services, Aidan Macqueen, is happy to act as a reference and can be contacted on +61 2 6660 0224 for comments from the clients perspective.

systems. Additionally, data and control signals were transmitted between remote reservoirs and booster pump stations and the central control system.

Richmond Valley Council engineers felt that the plant would benefit considerably from the consolidation and upgrade of the existing legacy control systems such as RadTel.

The main goals of this project were to remove systems that introduced unnecessary risk of failure and install current control systems to take advantage of the latest technology.



Original Central Control Panel

The Central Control Panel was a mammoth floor mounted console that contained the chart recorders, indicators, fault alarms, and controls to manage the plant. This was removed and replaced with a single control cabinet housing a ClearSCADA installation utilising multiple screens to manage the original functionality and the newly integrated functions

Contents of our next newsletter includes;

Wheeland Lumber Co USA: New TS Manufacturing Trimline, new controls & production TallyView.

AusWest Timber: New Edger controls with Edgerview at the Pemberton Sawmill WA.

Auswest Timber: Dean Sawmill WA New A E Gibson Edger with AE EdgerView & Controls.

PNG Forest Products: New Set-works control on Log Carriage.

A&E NEXT NEWSLETTER

A&E USA Welcomes Jim Utz

A&E USA Sales/Controls Engineer

Hi I'm Jim and I have 20+ years experience in designing, programming and implementing automation and control systems, my PLC skills include: Allen Bradley, Modicon, GE-Fanuc, GE-Proficy, Siemens, TI and Square D.

I have in depth experience in control system design and software development from project conception and planning to the final operational system.

My core strengths include: manufacturing, instrumentation, feasibility analysis, preliminary engineering, system design, software development, project management & problem resolution.

Whilst working for a number of Companies in my career to date, including field Service Engineer at Kockums-CanCar in Alabama and SAAB Systems in Washington and as Project engineer at COE Manufacturing Co., Portland, Oregon, I have gained the following skill sets:

- Managing the analysis, design, programming and support of new and existing automation and process control systems for the wood products division in the Eastern half of the United States.
- Performing capital project feasibility analysis, preliminary engineering and budgeting for new projects and existing plant major renovations relating to learn manufacturing.
- Performing statistical process control and business analyses using and developing linear optimization programs.
- Developing, designing and programming new PLC and computer based automation systems and upgraded existing ones.
- Evolving SCADA information systems that resided on local Oracle databases at the plant level into a fully enterprise-wide system with full Oracle database replication to corporate headquarters Oracle servers.
- Development of intranet web-based log purchase modeling applications that resulted in \$5 million annual savings in fiber procurement costs.
- Sales, estimating and bidding structural steel jobs, material purchasing, accounts payable and receivable, manufacturing operations, welding and fabrication, shipping and receiving.
- Responsible for the wireless instrumentation control system integration with either the existing building automation control system or directly control the HVAC equipment.

In addition, I worked for a number of companies including Champion International in Texas (which became International Paper Co in 2001) as a Capital projects Engineer.

I also owned my own company for 5 years, in Tyler Texas, "Acufab Welding & Fabrication, Inc", a steel fabrication company that manufactures structural steel packages for shopping malls, oil field equipment and other commercial structures.

A&E Main Office Welcomes

We welcome Mike Steel to our NZ office

Hi, I'm Mike Steel and I started as Services Manager at A&E in February this year.

I am originally from Greymouth but attended Tauranga Boys College where I was in both the First XV Rugby team and the First 8 Rowing squad.

I have been a qualified electrician since 1988 when I completed my apprenticeship with Wam Electrical (A&E's former sister company).

Since then I have worked at various places both in New Zealand and the UK as a self employed contractor and site electrician.

Most recently I was the electrical team leader at Goodman Fielders Champion Flour Mill for seven and a half years where I was responsible for the Electrical maintenance and Installation on site. After that I was an electrician for Burner Services for eighteen months working with boilers fuelled by LP Gas, Natural Gas, diesel & wood pellets and also doing Electrical design, Installation & maintenance & CAD 2D drawings.

I enjoy spending my spare time with my family, fishing, diving and sailing.



We welcome Tim Johnson to our NZ office

Hi, I'm Tim Johnston. I am 24 years old and started at Automation & Electronics in November 2012.

I graduated from Canterbury University after completing a Bachelor of Engineering in Electrical and Electronic Engineering with Honors in 2010. My final years subjects were Communications Theory, Controls, Electromagnetic, Signal Processing and Software.

After completing my degree I worked in Auckland at iMonitor Ltd, a small start-up based around providing real time telemetry. My major project at iMonitor was writing a driver for an embedded system.

Currently I am running to keep fit and playing hockey.



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