

1916-2008 NILSEN 92 YEARS



NILSEN

review

ISSUE 17, JUNE 2008



NILSEN EXCELLENCE





From the Managing Director

2007 and 2008 have been years of growth and development for the Nilsen Group again focusing on our people and innovation as well as aiming to deliver a high quality consistent outcome for all our partners.

We have continued to focus on developing our people and giving them new challenges. I am sure that many of you will have noticed a number of new faces and also a few who have moved locations to new roles throughout the Group. Our NSW and QLD businesses now report to the one General Manager. The teams from both businesses are responding to the renewed and dedicated focus and are growing sustainably with the many opportunities available in both the states.

Another area of significance where we are expanding is in the area of mining and resource projects. During the last couple of years we have steadily expanded right across Australia into

this important market segment of the Australian economy, employing all of our areas of expertise. To all the Nilsen team, our employees, customers and our suppliers throughout the country, thank you again for your support in everything we do, as without that support we could not continue to deliver to our customers' high standards.

As you will see in the following pages, the scope of work we undertake is very broad and I trust that you will find this snapshot of our business insightful as to what we do for our clients and for our prospective clients' future projects.

Thank you for your custom in the last year and we look forward to continuing to work with you in the future and develop the existing relationships further and to forge new ones. As always we would welcome any feedback on any of the information within this Nilsen Review.

Mark Nilsen
MANAGING DIRECTOR

Vale Oliver John Nilsen: President of NILSEN

21.11.1940 – 20.02.2008

He will be remembered by all of us for different attributes,

- His wit
- His generosity of spirit
- His intellect
- His sporting prowess, tennis, cricket, football
- His leadership
- His innovation
- His education, Melbourne University Honours Engineering Degree and Harvard MBA

He spent all of his life associated with Nilsen's and forty of it as a major influence of the companies' development and direction.

John Nilsen was very proud of the people at Nilsen and their achievements in the 90 years of the Company's history including the period commencing with his taking over the managing Directorship in 1980 from his late father Victor Nilsen. The Nilsen Group of Companies made great strides forward during the following decades. Despite John Nilsen's health issues he maintained his lively interest in the progress of Nilsen not even flagging in his wish to be kept up to the minute in the last few days of his life regarding the employees and business matters.

Most of all he will be remembered as a gentleman.

Mark Nilsen and Family

our review In Review



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Our website will always be a work in progress. Check it out at www.nilsen.com.au.

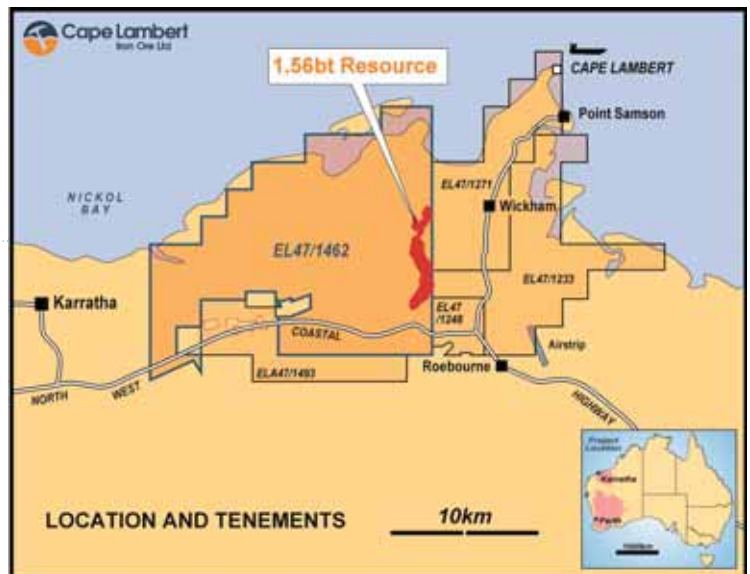


It saddens me greatly to inform you all that my father has passed away. He fought his illness with immense determination to the very end.

News from Western Australia

Switchboards for Rio Tinto's Cape Lambert Operation

This huge iron ore project continues to provide great opportunities for many engineering disciplines. Recently Nilsen (WA) supplied four medium voltage 6.6 kV switchboards for the Cape Lambert site. Each switchboard consists of 45 tiers of withdrawable circuit breakers, contactors, metering, protection and busbar chambers. The switchboards are respectively being sited at the Reclaimer and Wharf Substations. This is one of numerous Switchboard contracts Nilsen has supplied to the Mining industry.



Submarines rise to the surface



undertake work in Western Australia indefinitely. Upon completion, the facility will accommodate 185 people.

Key features of our new facility include:

- modern office accommodations;
- a large maintenance hall for undercover submarine work; and use of the Western Australian Government-funded floating dock, transfer facility and access to the CUF's eastern wharf extensions.

The award winning Common User Facility (CUF) at the Australian Marine Complex (AMC) continues to go from strength to strength.

The expansion program contemplates:

- Extension to the eastern wharf to berth up to three naval vessels simultaneously (two frigates and one submarine).
- First stage of a floating dock to transfer submarines and other marine vessels to shore, capable of expansion to launch and retrieve the navy's future amphibious ships.
- Construction of a marine vessel rail transfer system.
- Dredging works.
- Upgrading the capacity of electricity to the facility, which was awarded to Nilsen (WA). The state-of-the-art facility represents a consolidation of all Western Australian submarine maintenance and upgrade activities, and provides a commitment to



Comet Bay blazes bright

Comet Bay College is an example of the growth on the Southern Metropolitan Coast line of Western Australia. After sharing facilities with the Comet Bay Primary School, 2007 was the year the college moved to its official site south of the Primary School.

Stage one has expanded to cater for year 8 and 9, with 2008 bringing Year 10 to the college. The school incorporates Year 8, 9 & 10 block's, Gym, Library, Cafeteria, Performing Arts area and Administration.

Nilsen (WA) Pty Ltd was proud to be part of the growth of this booming area and put its expertise to good use with the supply and installation of the electrical reticulation. The job was completed late last year.



Shopper's Paradise in Armadale

Part of the expansion of Armadale Central is represented by Westzone Enterprises Pty Ltd's expansion of its available retail floor space from 8,000 square metres to 16,000 square metres to incorporate Big W, Woolworths, 58 specialty stores, a food court and an eight screen cinema development. The project takes into account Armadale Redevelopment Authority guidelines.

The ARA focus is on:

- Encouraging innovative design
- Enhancing parks and gardens
- Increasing overall performance and service to the community.

Nilsen (WA) Pty Ltd played an integral part for the electrical supply and installation of:

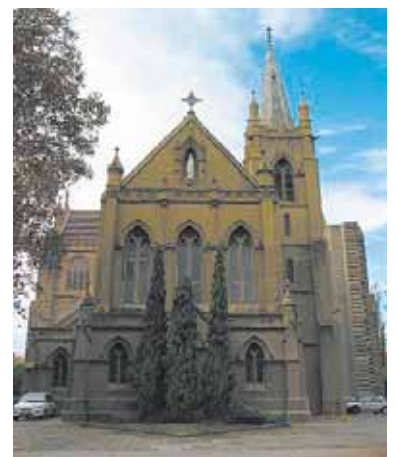
- Consumer Mains and Sub mains
- Switchboards
- Conduiting, cable trays and cable ducts
- Emergency Lighting and Exit signs
- Power installation including 3 Phase applications
- Commissioning and Testing



The bells will ring brighter again



The restoration of a historic building is often a complicated task and more so when the building is in fact a church. Nilsen (WA) was awarded the contract for the electrical refurbishment of Perth's St Mary's Cathedral. Following decades of planning, consultation, research and organisation, St Mary's Cathedral will re-emerge – respectful of its heritage and with the ability to meet the contemporary needs of the Church and the community to faithfully serve generations to follow. There is no such thing as ancient wiring, electrification, at its earliest stage not commencing until the mid nineteenth century,—but electrical conductors with insulation in a compromised state is usually found in older buildings let alone those that are close to a century old. But St Mary's was consecrated in 1845—with wiring in the slender spire following quite some time later. Nilsen (WA) was chosen to do the modernisation without affecting the cultural and structural integrity of Perth's important icon.



New developments in South Australia

A bridge, not too far but plenty complicated



The Port River Expressway links South Australia's major port and rail terminals at the Port of Adelaide directly with the AusLink (AusLink provides a planning framework and funding for the Australian Government's investment in land transport infrastructure). The new expressway will complete the link, connecting Perth and Darwin via Port Wakefield Road, as well as the AusLink National Network to Sydney and Melbourne and the Interstate Mainline rail network. The Port River Expressway is also an important strategic transport route for South Australia, contributing to South Australia's economic development by providing an expressway and new road and rail bridge connections across the Port River.

Nilsen (SA) provided extensive electrical works for stage 2, comprising physically of a four lane high-level, opening road bridge across the Port River between Docks 1 and 2, linking with Stage 1 at Francis Street to the east and Victoria Road to the west. The bridge is of the bascule design with a centre, lifting section of 30 metres, sufficient to allow larger shipping to pass. Stage 3 comprises of a similar design rail bridge. A unique feature of the new moveable Port River Road and Rail Bridges is that they will be operated from a control centre located 12km away. Nilsen is prime contractor to Abigroup Construction Pty Ltd who is responsible for the overall contract.

After many long months of work and time resolving mechanical installation issues Abigroup Contractors successfully lifted the massive rail span on the 20 Dec 2007.

Further work recently completed included mechanical adjustments and balancing as well as the commissioning of the rail bridge in conjunction with Nilsen (SA) subcontractors, Sage Automation. This included energising the moveable span using the PLC control system. Using the PLC control system and main Variable Flux Drive the lift time is only 70 seconds whereas with the tertiary electric motor (used in emergencies) the lift time for the bridge is 30 minutes.

Nilsen Motor Control Centre can cop the heat

Nilsen (SA) was selected by Xstrata to supply a new Motor Control Centre for the Lead Smelter Line at Xstrata's Mt Isa mine site, a climatically tough environment demanding expertise and experience as well as the ability to deliver in a time frame of only eight weeks.

The MCC is rated for 800A, in a back-to-back configuration, with bottom marshalling facilities including customised gland plate arrangements to minimise on

site installation. The latter requirement was imposed because the new MCC was replacing an existing MCC and there was to be a minimum of interruption. The MCC had to be carefully designed to accommodate the required equipment within the space available and to provide adequate cable housing facilities for the existing cable network to be re-terminated with a minimum amount of site work possible.



Cutting edge Plant Hire



Nilsen (SA) recently supplied and installed electrical infrastructure to the Tagara Building Group's Bianco project. Bianco is a rapidly expanding and renowned plant hire company. Bianco selected Tagara to deliver a new building accommodating Hire Office, Structural Steel Offices and a new Workshop. Nilsen was responsible for electrical installation and the development of communications Security, MATV and CCTV Systems. Nilsen gathered a team of specialised subcontractors to assist in delivering the project.

The project was delivered in two stages to allow the client to begin operations in the Hire area while the Structural Steel Offices and Warehouse were still under construction. The development was completed in late 2007.



Oxiana selects Nilsen for switchboards and motor control centres

Following tough competition, Nilsen Switchboards have secured an order from Fluor (EPCM contract) on behalf of Oxiana for the Prominent Hill Copper-Gold Mine Project. This bolsters Nilsen's reputation in SA's Far North as the preferred supplier.

Prominent Hill is a green field site located 100km SW of Coober Pedy, the project includes the development of an open-pit mine (480m deep x 1.4km x 1.2km), a conventional crushing, grinding and flotation processing plant with an 8mtpa capacity, construction of a permanent village to accommodate a steady-state workforce of approximately 400 and construction of a haulage road, power line and bore field.

This six-month contract entails the design, manufacture, installation, testing and

delivery of five fire-rated switchrooms, ten motor control centres and other minor works, again demonstrating Nilsen's diversity and ability to meet total package requirements in demanding time frames.

A further addition to the scope of works was the plant process control panel including the supply of six, large PLC panels.



Nilsen switchboards on the ground for the Jackson Satellite Station

Nilsen recently completed the supply and installation of the new transportable main generation switchroom for Santos Ltd at the Jackson Satellite facility in South West Queensland.

Nilsen worked closely with Santos and the project-consulting engineers Kvaerner to develop the packaged substation to fully meet the client's requirements and expectations.

Nilsen Scope of Work included:

- Design and manufacture of the new 415V Main Switchboard.
- Supply, manufacture and installation of the new switchroom.
- Supply and design of the new PLC package to manage four gas turbines and a diesel generator power plant with full synchronising and load management from a remote control room.
- Factory and site commissioning.

Nilsen demonstrated its ability to deliver a packaged solution to Santos by working with a number of its preferred suppliers such as GPA Engineering, Woodward Controls and Ausco Switchrooms. The project required complex site interfacing and many on site modifications to achieve the final result and performance expected by Santos.

But don't just take Nilsen's word for this!



"Nilsen Adelaide constructed a 415 volt switchboard for Santos, at the Jackson Oilfield in South West Queensland. The switchboard was well designed and constructed, built with good quality materials, the latest Technology, good quality accurate drawings, and delivered on site on time. The job went very well, and the finished product is very functional, and looks terrific.

Nilsen showed a Professional approach to all aspects of the switch board project, especially support during and after the delivery to site. They also worked hand in hand with the GPA Electrical Engineers and Woodward Techs during the design/construct/commission stages.

We were also very happy with the way their Techs integrated so well with the Santos Techs on site and the way they completed on the run mods / changes, also done in such a timely manner. They did well.

All Nilsen personnel we had any dealings with were very capable, knowledgeable, and more importantly, helpful and keen.

The visit to the Nilsen factory, when the board was nearly completed was most interesting."

*Regards,
Bob Vermaas, Santos*



Infrastructure is the name of the game

Nilsen (SA)'s Darwin operation is working on the grand scale projects – and that befits the biggest contractor in the Territory. Take the Darwin Convention and Exhibition Centre – truly a huge job is now nearing completion. The job encompasses lighting, power, communication and AV. The new Convention Centre is a very significant development for Australia's most northern city, once an outpost but now a vibrant commercial, industrial and tourism centre.

The waterfront facilities are continually being upgraded and along with this there is a very necessary expansion of electrical power reticulation. The contracting job fell to Nilsen and requires a completion date towards the end of the financial year. The reticulation voltages are 11 kV and of course 415 volt, the latter also being necessary for the street lighting phase.

The Darwin port also has a very extensive ship loader/conveyor facility the electricals for which also went to Nilsen. Programmable logic controllers in a distributed configuration with in excess of 800 inputs/outputs together with innumerable sensor switches, limit switches, etc as well as variable speed drives provide a massive installation and commissioning task which is now completed.



The Darwin undergrounding project, which has been in progress for many years, is now in stage 4. The project includes the reticulation of 11 kV and 415 Volt power. At the time of issue of this Review the rollout in Darwin's Rapid Creek and Millner is proceeding. The rollout involves considerable overhead transmission relocation, interfacing with other services including local water authorities and communication companies. When the project finishes, some 9,000 homes in Darwin will have safe, reliable power delivered free from the hazards of tropical storms.

The Northern Territory iron ore rail unload and stockpile facility is yet another massive infrastructure project. Iron ore from Pine Creek is transported in hopper wagons equipped with hopper bottom discharge doors capable of discharging their cargo in ten seconds. Some 1.5 million tonnes annually passes through the facility. The project for Nilsen involved the installation of Siemens PLCs and variable speed drives required for over 700 metres in aggregate for four conveyors and a shuttle.

Green Diesel Oil

Green diesel oil – sounds farfetched?? No, a company, Darwin Clean Fuels manufactures bio-diesel oil from palm oil, methanol, and glycerine, plus some other ingredients, no doubt, but the end result is a green fuel. In addition to complex manufacturing plant, extensive storage facilities are needed – in fact, some 12 tanks – and Nilsen (NT) handled the electrical facilities for the tank farm. The scope of work not only included power reticulation but also an extensive instrumentation rollout.



Major achievements for Victoria

Going Green

The Digital Harbour Building towers above the Telstra Dome in Melbourne's Docklands Precinct. Built by Baulderstone Hornibrook, it is a four-star Green building. Providing the electrical services for such a structure is a challenge. Nilsen (Vic)'s Contracting division accepted the challenge completing the installation of a very large scope of work virtually encompassing everything except the upstream substation provided and installed by CitiPower. The name of the building reflects the state-of-the-art activities of the Harbour Management including the visual monitoring of port movements around all Australian ports and mineral as well coal-loading facilities. Nilsen (Vic)'s challenge was not only to install the electricals associated with high-rise buildings, i.e.: main switchboard, risers, distribution and sub-distribution boards but to interface with ultra-sophisticated building management systems which not only includes lighting and climate control but limited area energy consumption monitoring by means of digital electrical metering. In addition there is an extensive and seamless standby-power system involving on-line UPS systems, standby generator installation, earthing and lightning protection, emergency lighting, communications backbone including optical fibre and MATV as well as building security systems.



The contract involved in addition to the technological parameters, a balancing of very critical manpower issues such as the interfacing with various trades working in parallel at a number of construction stages, the managing of

complex OH&S issues as well as UTU issues.

Nilsen (Vic)'s efforts were recognised in being a finalist in NECA 2007 excellence awards.

Sands might shift, but not Nilsen's Technical Excellence

Zircon and Rutile are important commercial ingredients in the preparation of a variety of important materials such as Titanium compounds including paints and Zircon is a very important ingredient additive to foundry sands. The Douglas mine, 85 kilometres northwest of Hamilton mines these valuable minerals. However, the beneficiation process handled by Iluka Resources Ltd, in Hamilton is a very necessary step in adding value to the mineral sands. The electrical scope of the beneficiation plant

went to Nilsen (Vic) and to call it a huge job is an understatement. Just look at what was involved:

- 8,650m of cable ladder;
- 30,325m of steel conduit;
- 210,230m of cable;
- 6,002 cable terminations;
- 3,150 light fittings;
- 1,680 instruments and associated control cabling;

- 1200 distribution boards / control panels;
- 200,000 plus manhours.

Nilsen was an integral part of the massive workforce delivering the Iluka Project. The project workforce peaked at approximately 700, which was a particularly challenging undertaking for all contractors involved given the remote location, the demand within the current market nationally for specialist resources and the industrial environment.

Morwell is getting bigger at the coalface

The work just keeps coming in at Nilsen (Vic)'s Morwell office. To name the latest jobs: Yallourn A maintenance contract, a large bucket wheel dredge refurbishment program, upgrading the electrical reticulation at True Energy's brown coal mine. It means that expansion of office facilities was the urgent order of the day. Morwell Manager, Graham Bone arranged for the building of six offices to house new engineering, estimating and design functions. And talking about the technological challenges Morwell faces: upgrading True Energy's 6.6 kV reticulation involves sticking closely to the requirements of mining standards such as the earth protection of trailing cables and mobile equipment, insuring the integrity of various types of protection relays and pilot wire monitoring. Similarly the bucket wheel refurbishment involves specialised services including the commissioning of large variable speed drives and ensuring that the electrical reticulation can support the level of harmonics involved with the drives.



Gold from Garbage

The Heatherton landfill site in Melbourne is a malodorous location – but then landfill sites are not tourist destinations. There is nevertheless 'gold' hidden in the garbage. Deep down, in the bowels of the landfill, there's methane. Pumping it up and using it in a gas turbine/generator set-up provides useful energy and virtually no CO₂ emission when compared to that of burning coal or brown coal in conventional thermal power stations. Nilsen (Vic) Field Services provided the electrical services for the site including bringing power in, switchboards, motor control centres for the variable speed drives necessary to power the methane pumps – a small project but invaluable in terms of gaining further technical expertise.

Nilsen in the swim

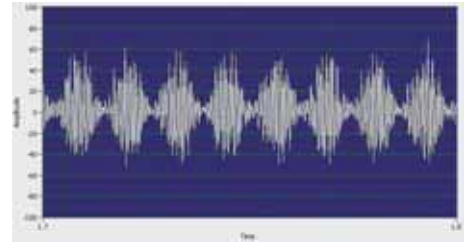
During the Commonwealth Games last year, one of the considerable challenges posed by FINA was the construction of a temporary Olympic-sized pool at The Rod Laver Tennis Centre in Melbourne. The provision of electrical services included the wiring for pumping systems, pool lighting, water heating and temperature control, stand-by power, associated switchboards and distribution boards fell to Field Services. The particular challenge was to accomplish the scope of work under extreme time line pressures over a period of only a few weeks.

Preventative Maintenance Prevents Tragedies

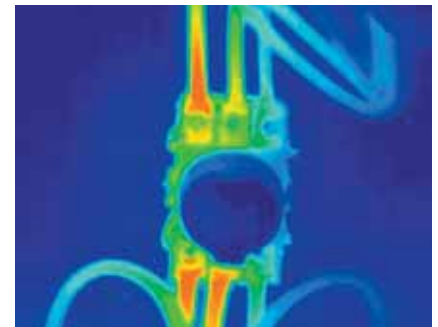
A team of surgeons are hovering around the operating table when suddenly the theatre lights fail. Impossible scenario? First response would be: impossible, because the standby systems would have come into operation on the dropping out of supply. But what if a catastrophic failure in the switchboard housing the stand-by, changeover load-make switch had occurred. It is precisely to minimise the chances of this occurring that the Nilsen (Vic), Field Services Division provides a seamless preventative maintenance service. Called TEGG, it is originally the brainchild of a group of leading USA companies providing products and services for facilities management. Nilsen (Vic) some four years ago was appointed as franchisee but since then the South and Central Australian, Western Australia, New South Wales and Queensland Nilsen Companies have become involved so that now Nilsen is exclusive TEGG franchisee for Australia.

TEGG comprises of a suite of technological and visual inspection protocols together with record-keeping

systems and software. Thermal inspection utilising thermographic cameras is one of the salient features of TEGG. Inspection of busbars, busbar jointing, cable terminations as to uncovering over-temperatures and hot spots is critically important (copper can regress back to the annealed state and thus imperil rigidity to withstand fault currents). Other techniques include ultrasonic scanning to pick up changes in mechanical integrity of contact sets (degradation through arcing can be picked up) and changes in other critical parameters such as springs, contactors and solenoids. One of the most valuable



aspects of TEGG is the collection of historical data, which permits comparison of data and the spotting of incipient faults. Visual inspections and testing in accordance with AS/NZS 3000 are other features of the local TEGG preventative inspection protocols.



Networks plug into new business opportunities

Any wire connectivity?

Absolutely. Nilsen Networks now has access to the world's leading providers of BPL (Broadband over Power line) hardware. These devices allow customers to network electronic devices on their premises through existing power line infrastructure. There is no need to knock down walls or lay fibre optic cables to enable data connectivity. The solutions possible with this technology are limited only by your imagination.

Deployments globally and projects locally include provision of Broadband (at speeds up to 200mb/s!) to high rise apartment blocks, construction sites and schools. CCTV security solutions for businesses including external car parks, shopping centres and service stations. Multimedia network solutions (Voice, Video and Data) for advertising and signage at casinos, convention centres and shopping centres. In home

connectivity to network devices (Just plug an adapter into a wall socket and plug your modem into the adapter. Then plug another adapter into an electrical socket anywhere else in your home and you're done!). Finally partnerships with electrical utilities to provide Smart Grid Solutions (bringing intelligence to electrical networks). To find out more about the exciting possibilities of BPL technology call 1300 734 766.

A bit about the technology

The principle consists of imposing a high frequency signal (1 to 30 MHz) on the electrical current. The signal is then spread over the electrical grid and repeated along the way until its reception by a BPL adapter. The signal is extracted and low

frequencies (current) are neutralized in order to isolate high frequencies (digital data). The broadband Internet network and the local area network are connected to the power line via a modem server. At the other end, the customer computer is connected to

the power line via BPL adapter. All information transferred is protected by 128-bit encryption. Also each network has a built in firewall and offers MAC and IP address filtering.

Sophisticated Residence Communication System

Ryland's, a residential complex in Melbourne's Hawthorn, provides comfortable and independent living for its over fifty-five year old residents. One essential feature of this style of accommodation is that residents must be able to summon assistance in case of an accident or sudden illness. Nilsen Networks recently installed a

communications system (Vieo—Latin for to link) for this exact application at Ryland's House.

Vieo by Clipsal is an intelligent building solution providing an organisation wide technology solution, of which sophisticated emergency and assistance response systems are key features. Vieo

implementation is flexible and can be tailored to meet the unique requirements of aged care and retirement living communities. These Smart building solutions provide for a safer environment and consequently a greater sense of security for residents. To find out more about the Vieo intelligent building solution call 1300 734 766.

Westfield looks to Nilsen

Westfield is a massive organisation, which expects its contractors and suppliers to deliver on time and to do so smoothly. For this reason there are many projects, which are likely to overstrain smaller contractors. The Plenty Valley project of Westfield involves the expansion from existing 6,000 square metres to a staggering 49,000 square metres retail space, a food court with room for 600 customers, and a 25-metre high tower. In all it's a \$200 million dollar makeover which is now in view of a finish. The scope of the electrical works for Westfield Shopping Centre at Plenty Valley represents a complete installation with an outside supply at 415 Volts and a rating of some 1.5 MVA due to be completed late May. The scope of supply includes main switchboard, sub distribution and distribution boards, lighting and voice reticulation.



Ericsson chooses Nilsen

When Ericsson chose Docklands to house new corporate offices, it nominated Nilsen (Vic) to do the electrical fitout. The job involved the planning and execution of the electrical reticulation, communication backbone, and security systems. Summarising this way doesn't do justice to the size of the job which involved the roll-out of cabling to 3500 outlets over four floors, the installation of fibre optics as communications backbone as well as patching and commissioning of the network.



One of the interesting features of the project – and we might bear in mind the ancient Chinese saying “may you live in interesting times” was laying of all cable under raised floors, whilst fitting out such as partitioning was taking place at the same time. Considerable economics in the cost of cabling was achieved through clever adapting of the frame and cabinet layouts to minimise cable runs.



Nilsen (Vic) Switchboards – centre for excellence

Upgrade for Australian Paper Mills

The same high degree of technical competence is demonstrated in the plant upgrades of Australian Paper Mills' Pulp Mill in Morwell. The calendaring and other papermaking processing require highly sophisticated process control and motor control schemes. Nilsen (Vic) Switchboards was called upon to manufacture and install an extensive motor control centre (MCC) utilising a ProfiBus based industrial bus system with a large number of nodes for the

plant's programmable logic controllers (PLCs). A distributed control philosophy is employed in the APM facility, thus necessitating the deployment of MCC tiers throughout the plant. In addition an extensive upgrade was needed for the electrical reticulation, requiring the installation of increased capacity busbars as well as the manufacture and supply of some 24 air circuit breakers rated to 3200 Amps load current. Overall 129 motor control centre modules

were involved – a very significant number given that the installation and commissioning had to be carried out during a scheduled maintenance shut-down without affecting the regular period allotted for the interruption of the manufacturing processes. Nilsen (Vic) Switchboards proved its mettle by completing this complex task on time despite the inevitable problems that crop up with extensive plant modifications.

Once EastLink opens it will be smooth travelling for motorists

Electrical complexity doesn't immediately occur to us when we travel Australia's highways and major arterials providing the convenience of safe, efficient and fast transits. Road lighting is of course one area but so are the safety systems and ventilation requirements of tunnels and although unseen to the public eye they are an extremely important factor in the

provision of safe travelling conditions. The EastLink project now under construction extends Melbourne's Monash arterial to the Frankston Motorway at Seaford by some 34 kilometres of additional road and Nilsen (Vic) Switchboards is supplying 24 main motorway switchboards rated for 415 Volts and 16 kA for the control of road lighting. The EastLink project also called

for the construction of two tunnels, each of 1.6 kilometres in length. The electricals associated with the tunnels includes a total of 12 motor control centres complete with automatic power change-over switching and remote monitoring via an industrial control and monitoring bus (DeviceNet) system with data upload facility to indicate all operational switching sequences.

Green building project calls on Nilsen Expertise

The Switchboard division of Nilsen (Vic) has recently carried out some major projects. Take the job for the twin tower complex, rising up in Melbourne's Southbank precinct. Called the Freshwater Place, the new building will house apartments and a large number of commercial enterprises. Freshwater Place is an Australand project and the tower complex will comply with Green Star and the Australian Building Greenhouse Rating (AGBR) requirements. The electrical installation includes two main switchboards; each rated to 3000 Amps load current with a 63 kA indoor fault interruption level. In addition there are a further two switchboards; one associated with the central uninterruptible power supply (UPS) system, and the other with stand-by generator supplying the UPS and other essential building services including elevators in instances of prolonged power interruption. The latter switchboard has a capacity of 2500 Amps load current whereas the UPS board provides a maximum load current of 630 Amps. Together with a low-level distribution board for the elevators, and bus ducting between the two main switchboards, the overall job fitted very well with the high level of expertise in the Switchboard Division.



Important projects in NSW

Nilsen helps Coles Distribution Centre at Eastern Creek, NSW, keep its products fresh and appetising.

The new Coles Distribution Centre at Eastern Creek is huge, having some 42,000 metres of floor space. The distribution centre supports products requiring frozen as well as refrigerated storage. The inventory values in money terms are simply staggering – of the order of hundreds of millions of dollars and protection of that value is of enormous importance. Nilsen (NSW) was chosen to provide the installation of high voltage and low voltage distribution for the storage centre as well as the stand-by generation facilities comprising of three generators each with a 1 megawatt capacity. In addition Nilsen installed a Cat 6 communications network servicing the store control and administrative services.

Public-Private Partnership provides three schools for Newcastle

The three projects each encompassed all lighting, power, data, security, and fire protection systems as well HV works. The projects are part of a contract with the builders, Hansen Yuncken and will be completed shortly thus adding invaluable educational infrastructure to this important and dynamic community.

Orange Hospital Redevelopment

Nilsen is to deliver new technology to the Central West, NSW (\$180M DNC PPP – Private Public Partnership – Project). The contract has been awarded to the consortium head contractor, Hansen Yuncken. Nilsen (Qld) and Nilsen (NSW) are preparing to deliver electrical services providing a high technology transformation of the existing Bloomfield Site soon to be known as “Orange Hospital”. The Bloomfield site was formerly a motor racing track in the mid 1900’s and was re-opened on occasion for motor racing enthusiasts to race heritage racing cars. The current mix of hospital services includes mental health services and encompasses central west laundry facilities for Orange, Bathurst, Oberon and Blaney Hospitals.

Development of the site which began in December 2007, is scheduled for completion December 2010. Hansen Yuncken will construct a new main hospital, acute mental health facility and a forensic mental health facility. Construction will incorporate the refurbishment of seven heritage buildings, some of which some will be totally revitalised and others cleaned up around the edges.

Nilsen (NSW) is currently developing a dedicated project team to implement the upgrades in technology for existing buildings and the co-ordination of new buildings services. The project will also engage the services of Nilsen Networks (Vic) in utilising BPL (Broadband over Power Line technologies) for part of the necessary communication backbones.

New services will include an 11KV infrastructure from the zone substation 2.8kms away including an internal 11KV private network extension incorporating seven new substations and an 11KV Gas Turbine Co-Generation power plant, Linear Accelerator and other Nuclear Medicine Facilities, expansion of the existing Patient Wandering System, a Nurse Call system, a Wide Area Network and Helipad electrical reticulation.



Queensland pushes the envelope

Australand chooses Nilsen for the Coles Distribution Warehouse in Parkinson, Qld

Australand Nilsen awarded Nilsen (Qld) the contract to provide the electrical services for the new Coles Distribution Warehouse at Parkinson. The successful outcome for this tender demonstrates the considerable capacities of the estimating team and synergy provided by the Nilsen Contracting Divisions in VIC,

SA and NSW. The recently completed Coles distribution warehouses in Melbourne, Adelaide and Sydney provided invaluable data and allowed the Nilsen (Qld) team to come up with highly cost-effective solutions.

The Coles (Parkinson) warehouse has 7495 sq meter of frozen storage and

27420sq meter of cold storage. The works include high voltage distribution to the site and low voltage distribution around the site. The building has full essential backup from 3 x 1 megawatt generators. The electrical scope of works includes all light and power and a cat 6 communications system backbone.



Cairns Domestic Terminal Building

Hansen Yuncken has awarded Nilsen (Qld) the contract to refurbish the existing Cairns Domestic Terminal Building electrical reticulation. The project will be carried out over 2 years and involves the replacement of all the electrical services at the Airport without interruption of airport services and flight operations. Works include a new 22kV HV reticulation

system feeding two new substations. The substation location has new transformers, HV switchgear, low voltage main switchboards and 100% essential load generators. The terminal building will have all lighting and power replaced including new external car park lighting and apron tower lighting. So as to provide continuity of essential services, the refurbishment

is scheduled to occur in multiple stages. This project is again a good illustration how our clients benefit from the national experience brought to bear on State-based projects. At the same time there is a wonderful employment opportunity for trades people to join Nilsen (Qld) because of the considerable growth in Queensland-based projects.

Nilsen people

The apprentices at Nilsen (WA) continue lighting up the workplace with irrepressible good humour and excellent work ethics. The smiling faces below are the 'greenhorns' being first year apprentices. All are gainfully employed and benefit from the experience of third year apprentice 'father' Aaron Hassett.



Aaron Hassett



Mark Ellis:



Bodie Wedge



Duncan Hind



Elicia Jose



Jon Perejuan



Johnathon Paul



Terri Grist: Initially employed by Nilsen Bunbury in 2000, Terri is now the company accountant for Nilsen WA.



Sarah Beazley: is coming up to her year anniversary with Nilsen (W.A) in the role of Human Resources Manager. Sarah comes from a solid blue and white collar recruitment background and is currently busy centralising the recruitment and induction process.



Jeff Johnson: Has been with Nilsen (W.A) since 2007 as Commercial Manager and brings a wealth of experience to the organisation.



David Carrafa: has joined the Field Services business in Victoria as a TEGG Maintenance sales representative. David is an important part of the growing TEGG business in Victoria. Welcome David.



Phil Baxter: has taken over the role as Divisional Manager, Engineering Services in Victoria. Phil spent 12 years in the Contracting Division which enabled him to quickly gain the support of the total business. It is always great to see internal appointments. His energy and enthusiasm have seen him bring new opportunities to the Field Services business.



Mark Purnell: has joined the Switchboards Division at Nilsen (Vic) Pty Ltd as a Project Handler and is currently assisting on the APM project. Mark's input to this project is helping achieve great results.



Ian Strong: joins the Field Services business in Victoria as a TEGG Maintenance sales representative. Ian brings a lifetime of sales experience to the business and an endless amount of energy! Welcome Ian.



Wayne English: joins the Victorian contracting division as a project manager and brings over 20 years of commercial experience covering most of the major electrical installation projects.



Annette Rowe: has been at Nilsen (Vic) for 3 years now and assists with the day to day running of the Field Services and TEGG areas.



Adrian DeMartino: joined Nilsen (Vic) Pty Ltd as Commercial Manager in April 2007. Adrian has held various commercial positions with a number of organisations and holds financial qualifications. We welcome Adrian to Nilsen (Vic).



Vicki Vains: joined our Victorian Contracting Division in February 2007 as Administrator. Vicki has 20 years of office/administration experience and has proven to be a real asset to the Contracting Division.



Paul Tindal: joins our Victorian Contracting Division as an Estimator. Paul brings 15 years electrical experience to our estimating department. Welcome aboard Paul.



Martyn Cottingham: Relocated from New Zealand in 2007 and has been working within the Commercial Contracting Division as Project Manager. Martyn is currently busy running major projects such as Island Apartments, Coogee, Brighton Apartments, Mandurah and AK Reserve.



Dianne Wood: joins our Traffic Division in Victoria as Part-time Administrator. Dianne will be ensuring all administrative duties for the traffic division are kept up to date. Welcome aboard Dianne.

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