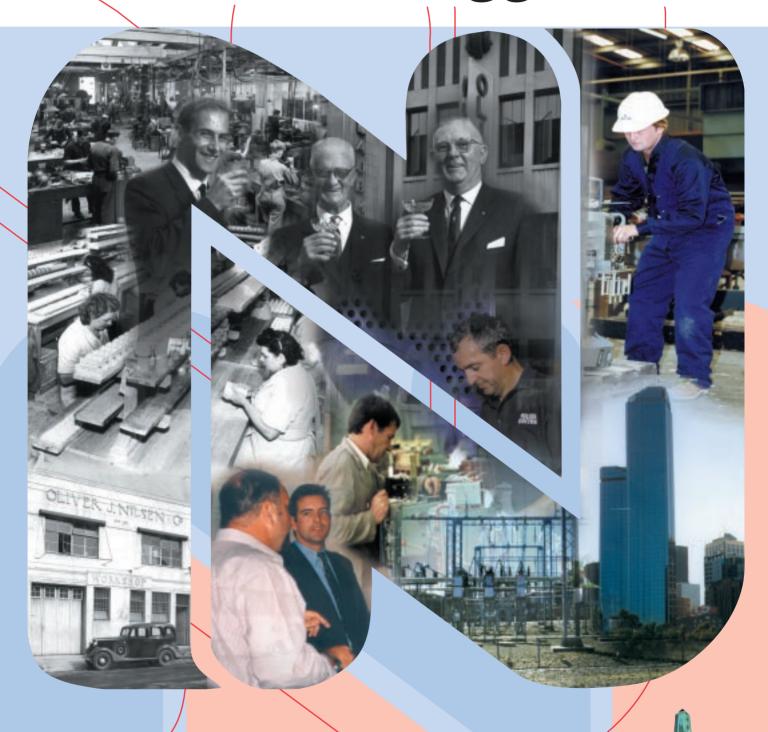


# REVIEW

1916 - 2001 **85** YEARS





NILSEN ELECTRICAL EXCELLENCE

## A WORD FROM THE CHAIRMAN

The last 5 months since the previous Review has seen the Group continue to meet its objective of expanding its Electrical Contracting, Communications and Engineering Services businesses throughout Australia. There is still considerable ground to be made in New South Wales and Queensland, but the basic structures are now firmly established. Orders in hand reflect this success, and are currently at record levels, approximately double the level of 6 months ago.

The Company celebrates its 85th year in 2001, and after considerable change over the 85 years, is now back to its roots as a Contractor. The type of work has changed with Communication activities now comprising a significant share of our business. Hospitals, as covered later in the Review, have also been a significant sector for the Company, and this has



been particularly true of the last 5 years. Our Switchboard building activity and High Energy servicing initiatives are also seeing substantial growth across Australia.

Since the last Review, there has been a significant restructure of our Electronic Metering and Technologies businesses. The two companies have combined to take advantage of synergies in the sales

and commercial areas. Metering sales have shown a welcome increase in the last 4 months, which reflects the reorganisation, and an increase in market activity as the future for full retail competition becomes clearer. Our Technologies company is also having considerable success in helping provide secure power supplies.

A feature of long established companies can be long serving staff and employees. This year, three people, John Clark, John Doyle and Peter Vandenheuvel, will complete 40 years, Leonie McNeil and Sam Sepe, 25 years. All have made substantial contributions to the Company and I congratulate and thank them.

John Nilsen Chairman

## **INDUSTRY BESTOWS GREAT HONOR ON NILSEN**

Nilsen were honored at the glittering NECA (National Electrical and Communications Association) Excellence Awards in Melbourne recently when Contracting Group General Manager Peter Vandenheuvel, was introduced as its new National President. Peter hopes to continue the work of past presidents to ensure that NECA, which is the only voice of the Electrical Contracting and Communications Industry, continues to be more and more recognised as a pre-eminent industry body.



## **OUR REVIEW IN REVIEW**

In this, the March 2001 issue of the Nilsen Review, you'll find the following:

Health care work is highly specialised and figures very high in our skills. See opposite for our latest major contracts.

Nilsen is 85 years young. Still Australian owned, still owned by the founding family. From a humble beginning, we turn 85 years this year, marching on to our centenary in 2016. Pages 4 and 5 give some insight in to how it all started.

Uninterruptible power, green power and metering power. Nilsen Technologies and Nilsen Industrial Electronics are taking a lead in all these initiatives. Pages 6 and 7 provide more insight.

Many switchboard builders are scaling down, outsourcing or just closing shop, yet our teams now write more than \$ 15M in switchboard orders per year across Australia. See how our people prosper whilst others fall by the wayside. Page 8.

Communications on a grand scale across cities or a lesser scale for an office or as part of an educational strategy, Nilsen has the skill and experience to do work at both ends of the scale and at all points in between. See how our teams in Darwin and Melbourne and all points between are shrinking the country and preparing the next generation for the wired world. Turn to page 9 for more.

Our involvement with Landmark Projects across Australia shows no sign of abating. Page 10 shows some of the latest in a very impressive string of Australian Icons.

Major contracts to rebuild ageing switchgear show Nilsen leadership in this highly specialised field. On page 11 you'll read how life of switchgear is extended at a fraction of replacement cost.

Our strength is our people. We pride ourselves on the quality of our people. As a dynamic organisation opportunities abound. We introduce our latest appointments and promotions on page 12 so you can put a face to the Nilsen people you talk to.

## **HEALTH CARE? WE CARE!**

Our Australia wide reputation in delivering Quality Hospital projects continues to grow.

Following on from successful completion of major works on the Joondalup Health Centre, Mount Hospital, Rockingham Hospital and the St John of God Hospital in WA, the Adelaide Medical Centre For Women And Children, the Royal Adelaide Hospital, Mount Gambier Hospital and Port Pirie Hospital in South Australia, The Royal Melbourne Hospital, The Austin Hospital and the Epworth Hospital in Victoria and the Mater Hospital in Queensland, the Group has been awarded a further three large hospital projects across Australia. These are Armadale Hospital



in WA (\$6M+), Alice Springs Hospital in the NT (\$3M+) and Wolsten Park Hospital in Brisbane (\$6M+). Builders specialising in the construction of state-of-the-art hospitals and health care facilities have realised completing these projects on time and on budget requires specialised skills, not only for their own teams, but also (and just as importantly), for specialist contractors.

This is even more important when, as is the case in many instances, work is at existing sites, requiring demolition

and making safe, as well as keeping the existing facilities going and integrating new works in the least disruptive way.

What makes hospital work special? Some of the difficult issues are:

- 1. Power supply reliability, it can be a matter of life and death.
- 2. Patient safety in operating, treatment and high dependency areas, always paramount.
- 3. Specialist knowledge for selecting wiring systems and equipment for hazardous areas.
- 4. Special attention to detail to aesthetically co-locate services and equipment.
- 5. Nurse call, patient monitoring, data cabling, required to the highest standards.
  - 6. Building security, critical in aged and mental health care highdependency facilities.

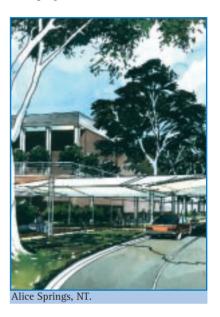
For our latest contracts, our thanks go to:

BGC Constructions for the Armadale Hospital Contract, which involves both upgrade and major extension works as well as psychiatric care facilities and the inclusions of a private hospital.

BGC are certainly setting a cracking pace on this project but our WA team is rising well to the challenge, with the project taking shape.

John Holland for the Alice Springs Hospital Contract, which involves new works as well as a total facelift, that aims to capture a design to reflect Central

Australia's unique character and community spirit. This project also has a co-located private hospital and accommodation for family or friends who travel to the Alice with a patient. Our SA team is well on top of this project.



John Holland for the Wolsten Park Mental Health Care Redevelopment Project, involving the demolition of 34 buildings, construction of 36 new buildings and refurbishment of 12 existing buildings. Work on this project by our Queensland team has only just commenced and involves sensitive heritage building refurbishment as well as new works.



Wolsten Park, QLD.

## 1916 - 2001, NILSEN 85 YEARS!

'Men succeed in proportion to the reality of their vision and the strength of their purpose.'

1916 was not a particularly



auspicious year. The Herald Sun 'Famous Front Pages' didn't rate an inclusion. It was only 15 years after Federation. The main mode of transport was the horse and cart, horsetram or steam train. Most streets and roads were dirt (or mud) tracks. Cars were still very much a novelty and airplanes were so rare, they drew huge crowds wherever they went. WWI was in full swing. It was just one year after the ANZAC landing in Gallipoli. Our troops were heavily involved in fighting at Verdun, Poizieres and on the Somme. The war effort was at its peak and Prime Minister, Billy Hughes, desperately wanted to bring in conscription but failed. Les D'Arcy was boxing in Sydney. Fitzroy won the VFL Final from Carlton, but beacuse of WWI there were only four teams in the competition. The others were Richmond and Collingwood. Whilst, in NSW, Balmain beat

South Sydney in that other league.

NZ horse Sasanof won the Melbourne

Cup, which, because of flooding was

moved to the Saturday. Six o'clock hotel closing was introduced. In 1916, Australia was an isolated

> island continent and the only way to get to anywhere else was by ocean steamer.

> But, for Nilsen, 1916 was a very auspicious year! It was in 1916 (on June 6th to be precise), Oliver J Nilsen commenced business as an electrical contractor at 386 Flinders Street, with a small workshop,

twenty employees and an investment of two hundred pounds. Born in 1884, 'O.J.' as he was known, left school aged

gas streetlights being lit in the rain. This led him to seek an apprenticeship in the then fledgling electrical industry and in 1901 joined T.C. Hyde and Company, Electrical Contractors. O.J. showed his leadership qualities early, becoming foreman on completion of his apprenticeship. Then, in 1916 he bought the company, founding the Nilsen Group and starting a tradition in innovation and customer service, doing business on the basis where a person's word was their bond, which continues to this day. The only thing constant in this world is change. In business, flexibility is the key to success. With material shortages caused by the War and the Depression (and later WWII), O.J. saw many opportunities in manufacturing and Nilsen became a



OJ (Centre), Vic (Right) and John Nilsen toasting our 50th birthday

fifteen in 1899, to work for Foy and Gibson. But, the potential for the then new invention, electricity, struck him some two years later when watching

major Australian manufacturer of the highly respected Nilsen, Federal, Nilsen Chromie and other branded products, not only for contracting



many other industries and domestic use. The Nilsen range of circuit breakers and fused switches became equal to worlds best. But Nilsen didn't just limit itself to these activities, it was also Australia's first commercial broadcaster and a film producer, providing career opportunities for many who's names are now Australian icons. The world does not stand still, however and as the seventies, eighties and nineties progressed, Australia became more and more part of the shrinking world. We became more and more

The wheel often turns full circle. A change in strategy was needed. Throughout its 85 years, Nilsen has

exposed to global competition and technological change.

proven itself flexible. As its markets changed, Nilsen changed. Now, because of the changing world, the Group focus has, in the main, come back to contracting. But our contracting, as well as earning the industry's respect and being recognised for excellence, has also changed considerably over those 85 years. Then, Nilsen Contracting embraced that new technology, electricity. It now also embraces the technology of the new millennium, communications and data. It could be said we look after the megawatts and microwatts with the same care and attention. As well, Nilsen Contracting has earned a reputation as one of Australia's leading Switchboard Manufacturers and providers of Specialist Electrical Servicing.

Nilsen Contracting, Communications, Switchboard and Service activities are now Australia wide. At the same time, the other Nilsen activities delivered via Nilsen Technologies, the importation of specialist electrical instruments, UPS Systems, Electricity Meters and Metering Systems are also recognised Australia wide. Men succeed in proportion to the reality of their vision and the strength of their purpose.

We, Nilsen, now just eighty-five years young, continue to succeed through our vision and strength of purpose. We look to 2016, our centenary year. Our 85th year sees us with our largest order book ever,

Over the last 85 years, Nilsen has

been an industry leader, having

major involvement, through its

many and varied activities on many

of Australia's landmark projects as

diverse as our National Parliament.

Sydney's Grosvenor Place Project,

Oval, the Mater Hospital in Brisbane,

Santos House the tallest building in

The Melbourne Cricket Ground.

the Darwin Airport, the Subiaco

SA and the first Australian built submarines. This industry leadership

was firstly under the guidance of

'O.J.', then, son Victor and now

grandson John, with O.J.'s great

grandson Mark also taking a very

active role as a Director. Nilsen is

unique in being the only Australia

wide Electrical Group, it is unique in

that it is still Australian owned, it is

unique in that it is still owned by the

a tradition we will continue to grow. Our 100th year will see us continuing to build our reputation as a respected industry leader like we are today.



Manufacturing operations at Fitzroy.

## **NILSEN PROVIDE POWER SOLUTION FOR UNITED ENERGY**

United Energy's Grid Control Centres in Mount Waverley and Burwood, Victoria require power at all times-even when power is cut through restrictions, or worse when generators fail. The Grid Control Centres contain massive IT installations which are the lifeblood of United Energy's operations. To ensure a continuous power supply, United Energy charged Nilsen Power Solutions to design, install and commission uninterruptible supplies comprising of stand-by generators, on-line UPS systems, switchboard, busses and cabling. The hardware for the first stage (Pinewood) is now completed. The total UPS system (shared between Pinewood and Burwood) includes two 275 kVA stand-by generators and three 120 kVA rating, IMV SitePro UPS systems. The Pinewood installation is provided with a total of 336 batteries. They are the new Monolite lead-acid batteries



Battery backup at United Energy

from FIAMM, characterised by high energy density, high performance, long life, and easy installation and provide sixty minutes of autonomy. Two hundred and forty batteries are of 180 amp-hour capacity and are utilised by two of the SitePro systems. The remainder of 96 batteries of 130 amp-hour capacity are utilised by the third SitePro.

> Two of the IMV SitePro systems are configured in IMV's unique Redundant Parallel Architecture (RPA) configuration which provides true redundancy. There is no common failure mode that would cause neither UPS to function. This is an extremely important feature of IMV's redundancy solution, since other architectures suffer from one or more common failure modes which void the security advantage of parallelling. IMV's RPA solution provides both load sharing and security!

The use of IMV SitePro on-line systems by United Energy carries another significant advantage, that of 'harmonic isolation'.

The design features of the IMV SitePro UPS systems cater for the very peaky, high crest-factor current drawn by hundreds of switch-mode power supplies that are an inherent part of computers and other IT equipment, without impacting on the input current to the UPS systems. Harmonic distortion in the distribution network is therefore kept at a minimum, and that is actually very important since power supply companies in the developed world are having to cope with over-stressed distribution networks as a result of as high as 60 to 70% computer / electronic connected load factors. Nilsen Power Solutions is a cooperative effort of Nilsen Companies and demonstrates the synergistic advantages of the Nilsen Group of Companies.



United Energy's comms centre.

Through Nilsen Power Solutions the Group is able to offer customers a complete solution package in a seamless design, supply, install, commission and maintenance structure.



## **GREEN BEATS BROWN**

With electricity generation contributing 34% (150 million tonnes annually) of greenhouse gas, attacking the environmental problem posed by the industry, is a sensible policy. The Australian Greenhouse Office is already working on the implementation of energy-efficient motors in an effort consistent with energy labelling of household appliances, to reduce greenhouse gas emission. Generally reducing our energy usage is becoming more of a requirement as citizens of one world and Nilsen is doing its bit with its EMS2600e 'Green Meter".

The EMS2600e is at the leading edge of electricity metrology measuring energy flow in both directions, ie: for energy imports (consumers) and exports (consumers who can generate electricity). An example of a practical application is the energy-efficient

home of Mr and Mrs R Chapman in Footscray. Mr Chapman, an electrician, installed solar panelling from which DC power is generated. An inverter converts the DC to 240 volts AC, and exports power during sunny days. Given the large number of bright days (daylight is what's needed but skies do not need to be cloudless), we can make an impressive dent in our coal consumption--and save significant dollars!



## **FUTURE OF METERING IN GOOD HANDS**

Metering is in good hands at Nilsen Technologies. Marketing, selling and supporting electricity meters fits the capabilities of Nilsen Technologies very well. The company is, after all, a specialist in test and measurement instrumentation. The photo shows Michael Guy, Manager, Revenue Metering, explaining the intricacies of the Nilsen 2600e 'Green' meter, technically called a four-quadrant meter to Bob Harris, General Manager and staff members. As Bob puts it, "the metering business in both singleand three-phase products is gathering

pace". Nilsen Technologies is well accepted by distribution companies and is proving that it handles technical support in the same efficient

manner for which the Company has justly earned good marks in test and measurement instrumentation. Its future is in good hands.



The Technologies Team talking meter

# **NILSEN SWITCHBOARDS,** A SUCCESS WHERE OTHERS STUMBLE.



Worsley Alumina.

Unbelievable changes. The Switchboard Industry has certainly seen its share of upheavals in the last year or so. Substantial companies have closed branch or satellite works, others have downscaled severely, a number have started to outsource metalwork, some have focused solely on 'mechano' systems from overseas, the odd one has had receivers appointed and some have just simply gone out of business.

On the surface, this doesn't paint a very good picture for this industry. Is it a fair picture?

We don't think so. We believe the industry is as healthy as it has ever been. And to prove it, our switchboard people have moved our business from strength to strength. Sales are now double what they were only one or two years ago.



Why so? When talking with Darrell Phillips and Brian Steele (Nilsen SA and Vic Switchboard Division Managers respectively), there are probably a number of factors, but the main one seems to be that we start with the end in mind, focusing solely on switchboards. Both Brian and Darrell point out that well-informed switchboard buyers that place high emphasis on long-term performance look for a number of features:



- 1. Leading edge design. Recognised industry leadership gives buyers confidence.
- 2. Customer acceptance. Repeat orders from industry icons shows wide acceptance.
- 3. Quality. Over 800 different QA checks and inspections ensure reliability.
- 4. Versatility. Designs must be equally well suited to Power, Motor Control and Distribution.

- 5. One stop shop. Ability to source custom and modular units from one point of supply.
- 6. Meeting Australia's unique requirements. Systems designed here better suit these needs.
- 7. Switchboard systems designed for switchboards. Not systems that have to 'make do'.
- 8. Flexibility. Switchboards must accommodate well all customerpreferred equipment.
- 9. Customer commitment. Delivering exactly what is required and at the promised time.
- 10. Fast delivery. Total in-house manufacture to speed up throughput and delivery.
- 11. Commitment to the industry. Manufacturers with long and respected track records.
- 12. Own control of fabrication. The foundation of a switchboard must be made in-house.
- 13. Own test reports.

Test reports bought or borrowed from others are no replacement.

- 14. Continuous development. Development is crucial in ensuring state-of-the-art designs.
- 15. A long industry history. Experience is just as important as systems.
- 16. Local installation and maintenance support. Support by the manufacturer not an agent.



Alcoa, Wagerup

# NILSEN COMMUNICATIONS, CONNECTING CITIES AND PEOPLE!

Accurate and reliable delivery of data at the microwatt level, often requires megawatts of power. Not only that, it requires the power to be blackout-free. The growth of the communications industry has created many opportunities across Australia for us as a truly national electrical and communications contractor. After all, the telecommunications industry knows no boundaries, geographically nor technologically and should not be restricted by the service providers it uses.

installations in Perth, Sydney and Brisbane. Or, installing the Digital TV infrastructure in all capital cities throughout Australia. Or, working on new exchanges for Telco's in Sydney, Melbourne or Darwin. Or installing a computer centre for a huge multi-national service provider. The list is endless.

Typical recent projects include:

- Stages 1 and 2 of the Optus Rollout in Darwin.
- Installation of new exchanges for UUNet and Primus and major works for WorldCom.
- The power supplies for Transmission Australia Digital TV systems across Australia.
  - Supply of switching routers for the Victorian Department of Education and Employment & Training.

This is where our blend of communications and electrical experience has offered many companies an opportunity of dealing



with a single supplier, not only for both their power and data system installations, but also through a single point contact, for projects all across Australia.

At the big picture end, a cross section of projects under way at any one time could see Nilsen hauling large multi-core fiber in streets as far removed as Darwin, Adelaide or Melbourne. At the same time we could be doing large data

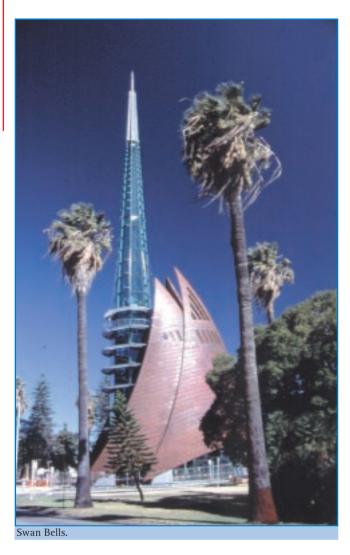
At the small end, we could be upgrading a network in a small enterprise, a college or school, or just moving a communications outlet in an office. At the same time, we could be supplying new routers or switches to over 2000 (yes, two thousand) schools!

 Installation of networks for many Catholic Education Office schools and colleges.

 Electronic ticketing to the Melbourne Cricket Ground and Subiaco Oval.

Our teams in Darwin and Melbourne, and all places in between are certainly helping to create the wired world and, by doing so are shrinking it.

# **BELLS AND SAILS, WA LANDMARKS.**



What have the Swan Bells in Perth and the New Maritime Museum in Fremantle in common?

One is already a landmark on the Perth skyline, the other is fast becoming one in Fremantle. What else do they have in common? Nilsen is involved with both.

Following on from our successful completion of the fire detection and occupant warning systems we have been entrusted with the safety training and fire maintenance for the Swan Bell tower and are currently installing the electrics, communications and fire systems on the New Maritime Museum.

Both buildings are unique and will be well recognised over time. They join the

many other landmarks in WA (Subiaco Oval, Egg Shaped Digestors, Ord River Sugar Refinery) and elsewhere throughout Australia as Nilsen landmarks. A further testimony to the diversity of Nilsen activities around Australia!

For those interested, the Maritime Museum will provide a striking aspect both from sea and land approaches and will be a focal point at 'Freo'. It uses ground water to augment the air-conditioning system and make it more energy efficient.

The Swan Bells, houses bells which have rung in the new year from the St Martin in the Fields church on Trafalgar Square for the last 250 years and which were given to the city of Perth by the city of London and Westminster.



# **SWITCHGEAR LIFE EXTENSION, A POPULAR CHOICE!**

There are still thousands

of oil circuit breakers in



If you operate oil circuit breaker switchgear, to extend its life as much as possible:

- Thermographically survey all your switchgear often, but at least annually.
- Inspect, test and service it regularly, commensurate with its age, condition and criticality to your business, but at least once each year.



service throughout Australia. Many are 30, 40 or 50 years old and becoming unreliable or even dangerous. Especially as many have not been properly or regularly serviced (or even operated) during their life. When circuit breakers fail, the result is usually frighteningly spectacular, often completely demolishing the circuit breaker, possibly the switchboard, and in extreme cases the switchroom or the plant.

These failures cause unbelievable problems, not only in cost of repairs

and loss of income, but also as an OH&S issue, for exploding switchgear can cause serious injury or death to an operator.

Replacement of these units is, however, both difficult and expensive as it could involve replacement of the switchboard and even all the cabling.

In the past, replacement has been the only reliable option. But now, our Engineering Services team have developed the art of refurbishment to a standard where this is a preferred alternative to replacement, at a fraction of the replacement cost. Many bulk oil switchgear owners have become aware of the advantages:

- Refurbishment is much less expensive than replacement.
- There is minimal interruption to the operation.
- The existing switchboard can continue in service.
- Existing cabling does not have to be disturbed, extended or repositioned.
- No extensive shutdowns are required, units can be fixed one at a time.
- Operational staff do not need retraining on new or different equipment.
- Only units that are "showing their age" need to be done.

The number of refurbishment projects now successfully completed for both utilities and large industry shows this option becoming much more widespread.

For more information, please contact our Engineering Services Division in your State for a fact sheet.



## **NILSEN PEOPLE.**



Our most senior appointment is David Lindner as General Manager of Nilsen Electric (SA) Pty Ltd. David has been with Nilsen in SA for over 20 years, initially as a Supervisor, then as Manager of Contracting Division and most recently as Assistant General Manager. In this new role, David is responsible for Nilsen activities in SA, NT and Queensland, almost half the Australian landmass. Congratulations David.



#### WE WELCOME



Derek Marsden, appointed National Sales Manager for Nilsen Technologies.



Ron Lucanos, who joins Nilsen Electric (Vic) as Area Manager NSW. Ron has much experience in contracting in NSW and will be looking to grow our NSW business.



Rob Hillas, who joined us late in 2000 as Manager of Communication Division at Heidelberg.



Tony Foster who joined Nilsen Technologies as Sales Engineer for SA and who brings with him a depth of experience in selling specialised equipment.



#### **CONGRATULATIONS 25 YEARS!**

Our 25 Years Service list just keeps growing.



We congratulate Leonie McNeil and Sam Sepe on achieving 25 years with Nilsen Electric in SA. Both joined the company in 1976, when it had only just moved to its current home at Ferryden Park!



If you think 25 years is a long time with Nilsen, this review we recognise three people for achieving forty years service!





John Clarke (Nilsen WA) who joined then Nichol and Co in January 1961. John has held a variety of positions with Nichol and now Nilsen. John has now been looking after the successful Maintenance Division for many years. Well done John!



John Doyle (Nilsen SA) joined Nilsen SA also in January 1961 and who has been responsible for Purchasing in Switchboard Division for the last 30 years. During this time John has seen a small switchboard operation become an industry leader. Well done John!



Peter Vandenheuvel, who joined Nilsen in SA in February 1961 and who also 'moved through the ranks' to Group General Manager, Contracting Group. Well done Peter!

#### Nilsen Electric (SA)

100 Regency Road, Ferryden Park, SA 5010 Phone: +61 (08) 8440 5300, Fax: +61 (08) 8347 0347 Email: nilsensa@nilsen.com.au

5 Pvne Close, Mt Gambier SA 5290 Phone: +61 (08) 8725 2442, Fax: +61 (08) 8725 2327 Email: gambier@nilsen.com.au

#### Nilsen Electric (VIC)

41 Kylta Road, West Heidelberg, VIC 3081 Phone: +61 (03) 9450 1300, Fax: +61 (03) 9457 5261 Email: nilsenvc@nilsen.com.au

71 Princes Highway, Morwell VIC 3840 Phone: +61 (03) 5133 9127, Fax: +61 (03) 5134 4631 Email: nilsmwl@nilsen.com.au

#### Nilsen Electric (WA)

4 Park Place, Bibra Lake, WA 6163 Phone: +61 (08) 9434 2311, Fax: +61 (08) 9434 2322 Email: nilsenwa@nilsen.com.au

Bunbury, PO Box 22, Gelorup WA 6230 Phone: +61 (08) 9795 6808, Fax:+61 (08) 9795 6808 Email: nilsenby@nilsen.com.au

#### Nilsen Electric (NSW)

72 South Street, Rydalmere, NSW 2116 Phone: +61 (02) 9638 2336, Fax: +61 (02) 9638 0343 Email: nilsensw@nilsen.com.au

#### Nilsen Electric (OLD)

Unit 7, 505 Lytton Road, Morningside QLD 4170 Phone: +61 (07) 3899 8866, Fax:+61 (07) 3899 8766 Email: nilsenq@nilsen.com.au

#### Nilsen Electric (NT)

Unit 2/43 Berrimah Road, Berrimah NT 0828 Phone: +61 (08) 8947 1134, Fax: +61 (08) 8947 3173 Email: nedarwin@nilsen.com.au

#### Nilsen Industrial Electronics

43 Sheehan Road, Heidelberg West, VIC 3081 Phone: +61 (03) 9450 1532, Fax: +61 (03) 9457 6327 Email: nilsenie@nilsen.com.au

#### Nilsen Technologies

150 Oxford Street, Collingwood, VIC 3066 Phone: +61 (03) 9419 9999, Free call: 1-800-623-350 Fax Stream: 1-800-067-263

Email: niltechn@nilsen.com.au

#### Nilsen Technologies N.Z.

Unit 4, Ambury Court, 1 Porters Street Eden Terrace, Auckland, New Zealand Phone: +64 9 309 2464, Fax: +64 9 309 2968 Email: sales@nilsentech.co.nz

#### Nilsen Electric (Thailand) Co Ltd

1/30 Boonyawat Road, Tambol Huawieng, Muang Lampang, S2000, Thailand Phone: +66 54 221 829

Fax: +66 54 221 82

#### www.nilsen.com.au

Editor - Peter Vandenheuvel