in action

Vol. 12 No.1

ACO CABLEMATE® Launch Issue

The newsletter of

ACO Polycrete Pty Ltd

ACO CABLEMATE® - NEW CABLE PIT & DUCTING HANDBOOK

ACO Polycrete Pty Ltd, Australia's foremost manufacturer of trafficable cable pits and continuous surface ducting systems has launched a new technical handbook for the electrical, communications and construction industries. The guide is also a product catalogue for **ACO CABLEMATE®** and features a new range of Australian made:

- Rigid, lightweight, strong **Polycrete®** (polymer concrete) pits;
- Flexible, light duty, moulded plastic pits;
- Continuous linear surface ducting systems;
- Lids and weather resistant access covers;
- Other associated products and accessories.

The new 88 page, A4 size, full colour handbook addresses many generic issues to guide specifiers and installers in selecting the correct enclosure for the right application for a long trouble free working life. Cable runs often traverse through different urban environments therefore specific consideration needs to be given to each individual enclosure. An enclosure's size, location, safety, security, installation and unique customer requirements are all explored in the handbook alongside relevant national regulatory codes and standard industry practices.

'...specific consideration needs to be given to each individual enclosure.'

ACO has upgraded its product range with all these factors considered to meet the current industry requirements and those of various authorities and clients. The guide gives specifiers and builders clear information on:

- Product solutions for all load classes;
- The industry's largest range of lids and access covers including ACO's new universal **PowerLok®** lid and other OH&S friendly lids.
- Purpose designed pit bodies manufactured from materials with excellent electrical insulation
- A full range of site accessories to ensure trouble free installation
- Services by an established technical advisory department to ensure correct product selection and advice on installation

Australian Made

To request your free 88 page handbook, contact ACO:

Tel (Aus): 1300 765 226
Tel (NZ): 0800 448 080
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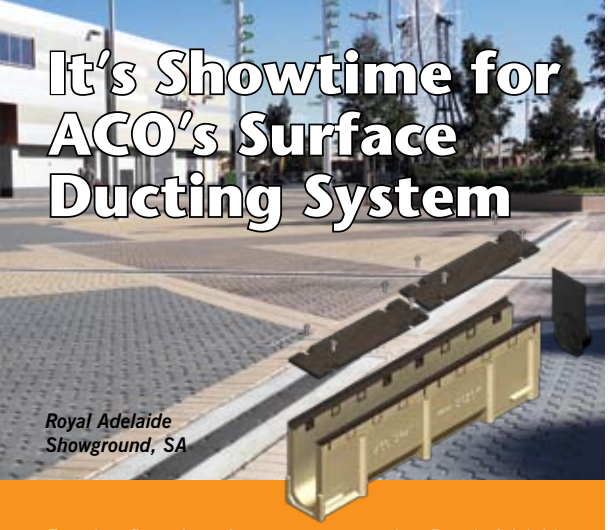
Email: sales@acoaus.com.au

This Issue

For more information on ACO's products or services, contact our sales office or visit:

www.acoaus.com.au

It's Showtime for ACO's Surface Ducting System



Royal Adelaide Showground, SA

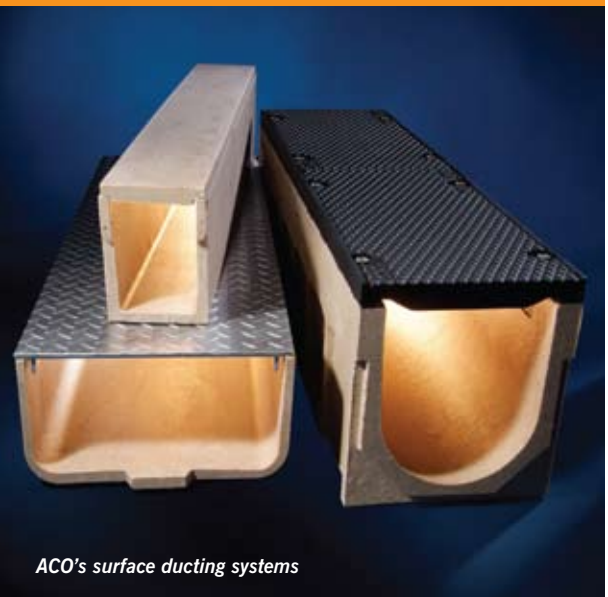
For the first time in many years, the Royal Adelaide Showground underwent a significant redevelopment. Within its precincts, the Goyder and Jubilee Pavilions are home of the annual Glendi festival, an annual weekend long festival that celebrates Greek culture in Australia. The pavilions' upgrade and their adjoining areas were recently classified by the State Government of South Australia as having 'Major Project Status', as it would attract more visitors and patrons overtime to its major events. The Northern Plaza, in particular, was also rebuilt to cater for a growing volume of exhibitions scheduled for the future. It would also cater for the ever increasing number of show rides and entertainment stands at the annual Royal Show.

The design brief required that the pavement withstand unprecedented traffic loads during its design life as large mining and construction equipment would be required for exhibitions and large transportable show rides, during festivities. In addition, the area also required extensive power supply infrastructure to these facilities and ease of accessibility to cables for maintenance operations without compromise to security, safety of maintenance crews and the general public.

Designers specified ACO's **CS100 Ducting**, a system of metre length modular surface ducting channels manufactured from durable polymer concrete. The channels are assembled in line to produce continuous runs and their profiled side walls provide structural rigidity and anchorage to the surrounding pavement.

'The design brief required that the pavement withstand unprecedented traffic loads during its design life...'

The system's OH&S friendly ductile iron lids are load rated to Class G900 – AS3996 and have anti-slip features. Each 500mm long section is secured to the channel by four high tensile steel bolts, incorporating friction grip washers to deter bolts from working loose during service. When lids are removed, specialised crews would then have uninterrupted access to the cables for ease of maintenance.



ACO's surface ducting systems

Main Road's Pits for cyclone proof bridge

The Houghton Highway duplication is a new 2.7 km bridge between Brisbane and Redcliffe. This $315 million project is essentially the replication of the existing bridge connecting Redcliffe to Brighton in Brisbane.

The new link, named the Ted Smout memorial bridge, is located 35 metres east of the existing Houghton Highway Bridge and is Australia's first structure designed to withstand hurricane storm events similar to that of Hurricane Katrina. It comprises three traffic lanes, a pedestrian/cycle path, and a dedicated fishing platform.

Lighting services are carried in the deck's concrete parapets with communication and electrical cabling running beneath the cycle/pedestrian lane. Only QLD Main Roads compliant cable pits were permitted to be used along the cable route. Cables were pulled through 150 cable pits of various sizes supplied by ACO, enabling safe access for maintenance.

ACO is an approved registered supplier of pits to QLD Main Roads and as required by the client, all components delivered to the project were accompanied with batch related material and test certification providing full traceability to every step in ACO's supply chain.

ACO CABLEMATE® Type(s) 1, 3, 4, 7, 8 and **60** cable pits comply with Main Roads Specification MRS 11.78 Fabrication of Structural Steelwork; MRS 11.91 Ducts and Pits; and manufactured to Main Roads standard drawings. All lids are tested to AS3996-2006; have an electrical insulation coating to AS/NZS1580.408.5-2006; and supplied with a certificate of compliance.

For more information, visit http://www.acoaus.com.au/accreditation.htm

ACO's QLD Main Roads compliant pits/lids

Ted Smount Memorial Bridge, QLD

ACO's plastic pit family

ACO today, has one of the industry's widest range of plastic cable pits, for both the electrical and communications industries. Robust, durable and UV stable, these enclosures offer an effective economic solution for light duty applications. The polyethylene material contains no toxic heavy metals and is therefore safe for the environment.

ACO's plastic pit range comprises injection and rotational moulded bodies and for most sizes, new innovative product design has been used to overcome some of the mechanical weaknesses inherent to plastic. Ever since the introduction of plastic for these applications, manufacturers for years have experimented with ribs for increased strength but often walls would still distort when placed in unstable soils. ACO's newly designed pits have straight sidewalls with moulded continuous ribs for the efficient transfer of loads without causing additional stresses to the structure. The designs have undergone a finite element analysis (FEA) to ensure the most effective design for their intended use and pits have been physically tested in an independent test laboratory.

For easy installation along cable routes, these pits are lightweight and easy to cut. The walls are designed with versatile cutoff points allowing contractors to either extend or reduce the depth of the enclosure to suit the depth/arrangement of the cables along the cable route.

'The designs have undergone a finite element analysis (FEA) to ensure the most effective design for their intended use ...'

Each pit is available with a choice of the industry's widest range of lids and weather resistant access covers. There are also provisions in the wall for the quick fitting of locking brackets for ACO's patented **PowerLok®** lid

A choice of 13 plastics pit sizes available

ACO's 'last inch' contribution to Amcom's Perth network

Perth CBD, WA

As part of Western Australia's expanding fibre optic network, Amcom Telecommunications Ltd (Amcom) continues to use ACO's cable pits as part of the provision of its broadband, telephony, fibre and colocation services to consumers and business customers. The core of Amcom's rollout structure is a state of the art, multi-service network, comprising a high-quality fibre optic backbone of high speed metropolitan area groups. These are located in Australia's main, central and western cities.

In what is known as a series of 'last inch' rollouts in Perth, **ACO CABLEMATE® Type 5** and **Type 8** (polymer concrete & plastic body) cable pits with steel lids were used along the route. Dependent on their location, these pits provided a secure enclosure for protecting the carrier's cable drawing and jointing function and in some cases helped to preserve the cable manufacturer's minimum radii for both storage and route directional changes.

'...these pits provided a secure enclosure for protecting the carrier's cable drawing and jointing function...'

ACO's steel **PowerLok®** lids were equipped with Amcom's padlocks, ensuring a high level of security for the continuity of its services to its many Perth based customers. To ensure optimum safety and convenience for Amcom's maintenance crews, the **PowerLok®** lid, unlike typical industry equivalents, does not contain a protruding locking bar spanning across the space of the pit. Instead, its locking mechanism is compact and kept high, well above the cables. The lid's access hatches are spring loaded and can now display the carrier's logo for quick identification.

Discreet Solution for a Showcase Project

Dandenong is the heart of Melbourne's growing south east corridor.

In partnership with the City of Greater Dandenong, the State Government of Victoria in November 2007, launched a $290 million initiative called Revitalising Central Dandenong. The initiative is being delivered through VicUrban, the government's sustainable urban development agency.

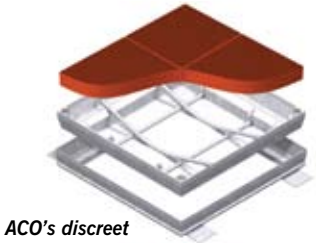
The master plan details a 15 to 20 year vision for one of Victoria's largest urban renewal projects. The CBD community will expand with new jobs, new homes and benefit from $1 billion of private sector development.

One of the projects is the upgrade of Lonsdale Street. This main thoroughfare divides the city and is destined to become one of Melbourne's great boulevards featuring wider, greener and safer walking areas, aligned by a bustling and diverse commercial retail district.

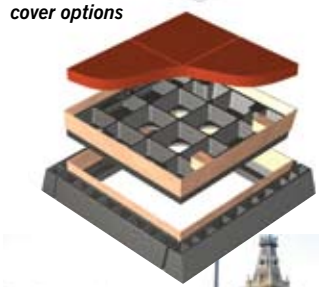
At night, the precinct will be illuminated with feature lighting expressing the area's broad range of cultures through the universal symbolism of a visual rainbow spectrum. The boulevards will comprise a colonnade of a total of 66 lighting poles housing LEDs of various colours to produce a composite spectacular rainbow effect.

An underground cable network was installed to provide power for street, footpath and seat lighting so that plants and art installations are illuminated. New cabling was also established for the boulevard's traffic lights and pedestrian crossings. Engineers, Arup required that all cable pits be durable and as visually unobtrusive as possible. Cabling was therefore pulled through more than 300 of ACO's **Polycrete®** (polymer concrete) pits & risers and to preserve the visual continuity of the pavement, ACO's **Pavermate®** access covers were installed.

Rated to Class B80KN-AS3996, **Pavermate®** (galvanised steel access covers) is a product solution for designers requiring a discreet cover. It allows the pavement material to be set into its pan to minimise the visual impact of any enclosure.



ACO's discreet cover options



Lonsdale Street, VIC

Polycrete® pits in BER Rollout

ACO's range of Polycrete® pits

In the 2009 Federal Budget, the Government announced the "Building Education Revolution" (BER). This is a $16.2 billion investment that provides world-class educational facilities, through new infrastructure and refurbishments, to all eligible Australian schools.

The BER programme in NSW is being project managed by Abigroup, Bovis Lend Lease, Brookfield Multiplex, Hansen Yuncken, Reed Construction and Richard Crookes who oversee the installation of many of its critical elements.

In many schools, new cabling, for the provision of power and data services, is run along various routes adjacent to new infrastructure. Cable pits are often required near the outdoor Covered Open Learning Areas (COLA) as well as near many new school halls which have been added to existing school buildings.

For the programme's completed projects, contractors have selected ACO's **Polycrete®**(polymer concrete) cable pits for their ease of installation and excellent strength for weight properties. Dependent on the pits location and function, locking and non locking lids were also selected to cover the enclosures.

Polycrete® pits have excellent insulation properties, high mechanical strengths, chemical resistance and zero water absorption, which makes them ideal as electrical and communications enclosures. They are lighter and therefore less cumbersome than traditional concrete pits and therefore generally do not require special lifting equipment.

Dee Why West Public School, NSW

The PowerLok®, pit locking system

Introducing the patented **PowerLok®** lid, which has been designed to complement ACO's wide range of **Polycrete®** and plastic pits. This new innovation has enabled ACO to launch the industry's first universal cable enclosure where a choice of standard or high levels of security is available. **PowerLok®** lids are locked without requiring a protruding locking bar from encroaching into the pit space as is still the case with typical industry pits.

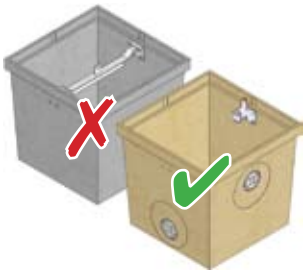
Globally, there have been documented cases where cable faults have caused pit structures or lids to become live. To prevent this occurrence, the **PowerLok®** lid is purpose designed to ensure metal components within the enclosure are positioned well away from cables running through the pit.

The **PowerLok®** lid is fastened to the pit structure through a bracket. A low level of security is achieved by simply closing the spring metal hatch and sliding the grey clip mechanism shut to engage the bracket. This is commonly suitable for general cabling applications. For a more secure locking, a bolt may be used to fasten the lid to the bracket through a metal chamber. For very sensitive areas, i.e. prisons, military bases etc., a security bolt or padlock may be used in the chamber thereby offering a higher level of security. The hatch also conceals the lifting hole so that the enclosure conforms to IP2XD- AS 60529 for a specified clearance above the cables. Company logos or other inscriptions can also be cast into metal spring hatches for easy identification.

'a choice of standard or high levels of security is available'

OH&S considerations too were incorporated in the design.

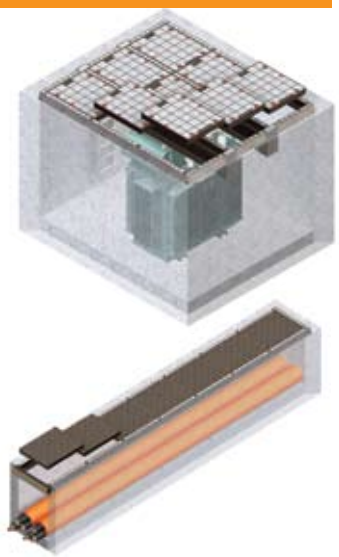
- Maintenance crews now have quick and safe access to cables without fiddling with cumbersome locking bars, fiddly bolts and other loose parts.
- Lids do not exceed 25kg and are slip rated to R10 - AS/NZS 4586
- A red marker (noticeable only if the sliding clip is unlocked) will save workers from bending over to check whether lids are locked during routine inspections.



The PowerLok pit locking system, making enclosures safer and securer.

ACCTRIX® programme - designers aid for covering large holes

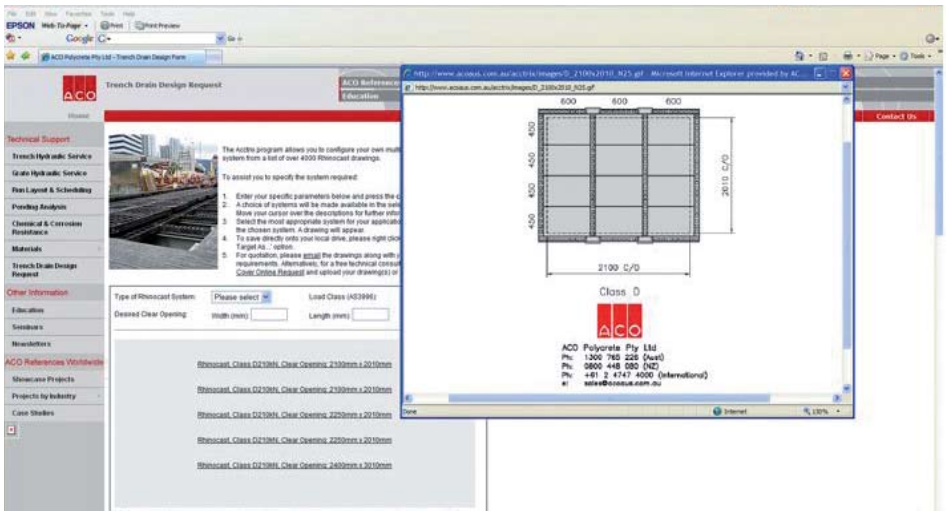
Maintenance (or access) holes and cable trunking runs are closed with access covers arranged in a multipart or trench run configuration. These enclosures are large reinforced concrete structures, sized according to the cable arrangement and may also be used to house equipment or cater for the co-existence of other services/utilities.



For ease of specification and pricing, the **ACCTRIX®** programme has been developed to enable engineers and contractors to design their own multipart or trench run system. The user will be given an option of 5 systems based on the enclosure's size and load class requirements. These may vary in configuration and individual cover lifting weights, criteria driven by OH&S considerations. Finally, once a preference is made, a drawing is generated for specification purposes and for submission to ACO for quotation.

The website also provides useful information to assist specifiers to select the correct access cover solution for the project application so that potential problems, such as failures during service, are eliminated. A number of key factors are explored in detail. To further assist installers, an audio visual installation tutorial is also accessible.

Visit www.acoaus.com.au/access/acctrix



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