

tractor in 1992, but halted due to contractual difficulties.

The powerstation is in the city of Cagayan de Oro, located in the bay area of northern Mindanao. Now with more than 300,000 people, the city has become the service hub of the region and a transshipment point for agricultural and industrial output.

To service the growing demand for electricity in the region, Mindanao Energy Systems Inc, known as Minergy, sought to develop a powerstation at Tablon, some 10km from the city's central business district.

Despite cessation of work on the site, items of electrical and mechanical equipment previously purchased for the project continued to be delivered to the site.

In February 1994, SKM was engaged by equipment supplier AEC International to assess the existing electrical design and complete the detailed design of the electrical system to allow the owner to call tenders for the project's completion.

SKM subsequently carried out site supervision and technical support work and the powerstation was fully commissioned last May.

The Minergy-operated Tablon Powerstation now supplies power to the local power utility, Cagayan Electric Power and Light Company.

SKM's project manager, Ian Cutler, said Minergy plans to increase the capacity of the station by adding two or three diesel generator sets.

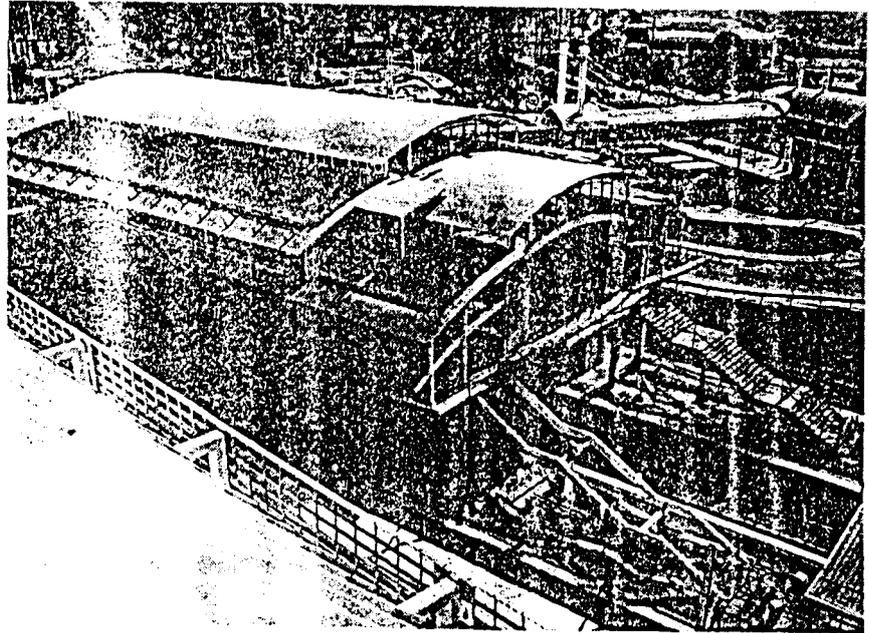
Redevelopment of Blacktown station

A \$25 million redevelopment of the rail and bus interchange at Blacktown in Sydney's west is due for completion later this year. It is a joint project between the State Rail Authority and the NSW Department of Transport with design and construction being carried out by Civil & Civic, which is also the project manager.

The project involves construction of a new station building and bus station for the rapidly growing population centre. Strategic planners estimate that by 2011 Blacktown will be the busiest railway station in the Sydney network for people boarding trains during the morning peak period.

The improvements are designed to cater for demand well into the future.

Features of the new building in-



The new main passenger hall at Blacktown station in Sydney's west. The enclosed walkway to the bus interchange is to the right.

clude a 10m high main passenger hall and enclosed walkways providing all weather access to platforms and the bus interchange.

BHP Building Products supplied steel products for the station interiors, roofs and exterior wall panels.

Rotary heat exchanger used at Jac Australia

A rotary air to air heat exchanger has been used in a waste heat recovery system at Jac Australia Pty Ltd, an adhesive label paper manufacturing plant in Tottenham, Victoria. The heat exchanger or sensible heat regenerator, designed, installed and commissioned by Melbourne-based Ecopower Consultants, recovers waste heat from the exhaust of an industrial paper drier and uses it to preheat fresh air being fed to the drier.

In this rotary heat exchanger the heat wheel is positioned horizontally across two vertical flues, one containing hot exhaust gases, the other containing cold fresh air, so that one half of the wheel lies in the hot air, the other in the cold. The matrix for heat transfer between the spokes of the wheel is Kapton plastic film. This heat exchanger is one of the first of its type to use this material which is capable of handling temperatures up to 300°C.

In the hot flue the hot air passes through the matrix and heats it. As

the wheel rotates the hot matrix passes into the cold flue and heats the cold air now passing through it. Bill Ellul, managing director of Ecopower Consultants, said the heat wheel op-

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erates at very high efficiencies of over 90%.

The system automatically controls the rotational speed to maintain the flue exhaust temperature exiting the heat exchanger at a high enough level to avoid harmful condensation of drier products in the gas stream.

With the reduction in the use of natural gas for heating as a result of the installation it is estimated that the installation will give a simple payback of 1.7 years.

IEAust in Indonesia

Planning a trip to Indonesia in the near future?

Well don't worry about feeling homesick - plenty of other engineers are already making their homes and livellhoods there.

IEAust's Northern Division now has an Indonesian Chapter. Your local contact for this Chapter is: KK Raihan (his name is really Krishan but he prefers to be called KK).

He can be contacted on telephone 21 526 1485, facsimile 21 526 1484.

His office is located at:

PT Kaltimex Jaya (Energy Division)

Times Square
2nd Floor, Unit 2C

Jalan HR Rasuna Said, Blok X-1
Kav.1 & 2, Jakarta.

Hoechst wins environmental award

Two awards recognising excellence in safety and the environment were recently presented by the Plastics and

Greenhouse: we compare well

Australia is far more successful in kerbing greenhouse gas emissions than people might think, according to Dr Jim Le Cornu, energy adviser at Shell Australia in Melbourne. Le Cornu is also a member of the IEAust's National Committee on Fuels and Energy. He said that even though Australia is unlikely to meet the international target of stabilising greenhouse gas emissions at the 1990 level by 2000, its efforts are a lot better than those of several other OECD countries.

Australia's greenhouse gas emissions in 2000 are expected to be only 3% above those in 1990. This puts Australia well ahead of countries such as Spain (25%), France (16%), Sweden (15%), Austria (10%) and Norway (6%), and on par with Japan (2%). Only the Netherlands (-3%), Britain (-5%) and New Zealand (-13%) have so far indicated they will not only meet the 1990 target but actually surpass it.

Le Cornu said these figures are contained in a paper just released by Treasury on interpreting and measuring emission targets. The paper argues that for Australia a reduction of emissions to 6% above 1990 levels would be the "equitable" equivalent of other OECD countries returning to 1990 level.

The paper interprets the term "equitable" to mean an equal percentage reduction of greenhouse gas emissions per capita.

The concept of "equitable burden sharing" is a cornerstone of the federal government's approach to the issue, taking into account that Australia is particularly dependent on cheap electricity from coal. The concept is the basis for the agreement reached earlier this year between the government and industry to reduce emissions by voluntary no-regrets measures, rather than by a carbon tax or other government intervention.

Le Cornu calls on engineers to take up the challenge. "To a large degree it will be engineers who dream up the no-regrets options, design them, fund them, construct them, start them up and operate them," he said.

"If engineers don't put their hands to the wheel and deliver the goods, who will do it?", he asked.

Chemicals Industries Association (PACIA).

Hoechst Australia Limited and the Altona Complex Neighborhood Consultative Group have been awarded PACIA's 1995 Environment Award for their significant contribution toward

a safer environment. Robert Westheimer of Air Liquide Australia was awarded the 1995 TG Crane PACIA award for initiating an original and effective safety program.

Hoechst's entry was entitled *Responsibility that extends into the future - development and implementation of an environmental improvement plan for Hoechst*

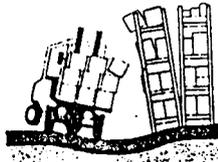
Australia Limited's Altona site, developed by Hoechst staff and the local community group it was the first plan in the Altona chemical complex and included measures such as:

- 50% reduction in water consumption
- elimination of contaminant stormwater discharge
- 50% reduction of emissions of volatile organic compounds
- improvement in energy efficiency
- reduction of greenhouse gas emissions
- one third reduction in solid waste
- encouraging car pooling among employees.

Robert Westheimer, as part of Liquide's Safety Month scheme, is encouraging each operating unit to be encouraged to "do something special" organised each work group to produce a video of a safety topic of their choice. Videos were produced on subjects such as removing asbestos plugs safely, emergency and evacuation procedures and safe working with ladders.

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