

## Year of the 'young engineer'

In a bid to address the current skills shortage being felt across a range of industries, Engineers Australia has devoted Engineering Week 2005 to the "Year of the Young Engineer."

The shortage of engineers is paralleled by many major projects and developments taking place, not only in mining, all across Australia.

So the emphasis on attracting young people to an engineering career is paramount in being able to meet future demands placed on the profession.

"We're in a skills shortage in the engineering industry, as well as in many other industries, and we chose to put a focus on young engineers to show what a great career you can have and all the different areas that you can work in," said Alexandra Sparvell, manager industry for Engineers Australia's WA Division.

She said that as the older professionals in the industry left, there was often a lack of young people coming through to take their place.

This year Engineering Week runs



▲ Attracting young people to an engineering career is paramount to the sector's future.

from the August 15-19, culminating in the WA Engineering Excellence Awards presentation at the Perth Convention Centre.

The awards cover nine categories — resource development, infrastructure and building, products and manufacture, environment, engineering for regional communities, research and development, international products and exports, small company projects and electronics, telecommunications and information technology.

Sparvell said this year's awards have seen a record number of nominations, with 35 entries across the nine categories.

The resource development category has attracted nine entrants, more than any other category.

This category attracts entrants from industries such as mining, agriculture,

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processing, oil and gas, solar energy, wind and water power.

Four of the nine nominations this year related to the trunkline system expansion project of the North West Shelf joint venture project run by Woodside Energy Ltd.

Woodside Energy received two nominations outright and two joint nominations, one with Atteris Pty Ltd and the other with JP Kenny Pty Ltd.

The project involved the construction and installation of a new 42 inch diameter subsea trunkline to provide additional product delivery capacity.

The trunkline runs for 135 kilometres in water up to 125 metres deep. During the cyclone season the waters are considered some of the most unfriendly in the world.

The project was budgeted to take 27.5 months and carried a budget of \$792 million.

It was completed in 26 months and \$113 million under-budget.

GRD Minproc Ltd's development of the Kansanshi copper project in Zambia is also in the running in the resource development category.

The Kansanshi project, for TSX-listed First Quantum Minerals, presented GRD Minproc with many challenges, not least of all the remote and harsh terrain.

The project was completed on time and on budget through innovative management and engineering techniques.

It also received a nomination in the International Projects and Exports category of the awards.



▲ Engineering groups have been kept busy undertaking expansions and new developments.

The relocation of Alcoa's Huntley mine operations in the south west of WA also earned a nomination.

The project involved the relocation of crusher facilities and the establishment of a new plant to support the mine. A conveyor system was extended to transport ore to the company's refinery in Pinjarra.

Consulting group Sinclair Knight Merz's application of 3D laser scanning on the upgrade of BHP-Billiton Ltd's iron ore export facilities in Port Hedland earned it a nomination in the resource development category.

By scanning the entire facility within four days SKM were able to construct a 3D model of the existing structure, reducing the survey collection period while saving time and money in the

design and construction phase.

The Varanus Island gas expansion project joint venture by Apache Energy Ltd, Piper Engineering Pty Ltd and Robert Elks and Associates, is also an example of engineering excellence in the resources field.

To meet new gas supply contracts the K12 Maxiskid project was undertaken to increase gas treatment and compression capacity.

The project is considered unique in the oil and gas industry after a large, fully assembled skid was transported as a series of discrete modules.

The on-time delivery of the major piece of infrastructure to the remote island location is a major engineering achievement.

The CETO wave power generator, developed by Seapower Pacific, is the final nomination in the resource development category.

The unit is attached to the sea floor and produces electricity and desalinated water with no fossil fuel input.

One unit is estimated to produce enough power for one hundred homes.

Winners in all nine categories will be announced at a gala dinner of August 19.

This is the 27th year of the WA Engineering Excellence Awards and serves as a precursor to the national awards.

"In each state of Australia we run the engineering awards and they go towards the national awards which are held at Parliament House in Canberra in November," Sparvell said.

