

IN BRIEF >>>

SOLOMONS ENGINEERS BETTER LOUVRE AWNING

The 'e3k' approach to engineered product innovation has helped Solomons Security and Blinds continue their tradition of providing leading quality products to customers.

Solomons Security and Blinds, a Queensland business, was opened by John Solomon 18 years ago. The business has recently expanded into a new factory at Cleveland, in the Redland Shire near Brisbane.

In its quest to provide customers with new and improved products, Solomons Security and Blinds approached e3k, the new product division of Gilmore Engineers Pty Ltd.

With a brief to design the components in a louvre awning system which would be strong, ensure a long product life, and still represent value for money, the e3k engineering consultancy team, based at Brisbane Technology Park at Eight Mile Plains, set off on a ground breaking path which lead to the development of a unique winding mechanism.

The forward-thinking engineers at e3k decided that rather than simply improving on well known ideas and designs, they would strip the problem back to its simplest form. This meant that instead of purely looking at what the current problems in similar products were, they looked at the required functionality of the components and then built upwards to develop a practical solution.

Carmen Keating, a principal engineer at

e3k, said, "The idea creation process for this project was extremely challenging and also highly enjoyable. As product design engineers we thrive on creating new and innovative solutions for real-world global markets."

The e3k team of engineers directed their lateral thinking skills to the product, using idea-generation tools such as brainstorming to develop a range of fresh concepts. They use this creative problem-solving approach in combination with engineering fundamentals to develop innovative and effective solutions for their clients.

Principal engineer Ben McGarry said, "We designed, computer modelled and prototype-tested an entirely new mechanism concept that is inherently more reliable and durable than anything else out there. We are now helping our clients to patent that same mechanism to maximise their return from our cooperative R&D (research and development) effort."

This combination of high-level creative thinking and focused engineering expertise is earning e3k a reputation for inspired engineering design.

"We often find that the most impressive engineering solutions are those that are simple yet effective," said Ray Hope, vice president of e3k. "Our clients know that it takes good engineering expertise to find and implement that simple, effective solution."

This new product was released by Solomons Security and Blinds at the Brisbane Home Show in October. ■

IN BRIEF >>>

UQ BURIES ARGUMENT ON CARBON DIOXIDE

University of Queensland researchers (UQ) are discovering the commercial benefits of burying environmentally harmful carbon dioxide (CO2) gases underground.

Using the process of geosequestration – where CO2 gas produced from industry is captured and stored in deep coal seams rather than released into the atmosphere – researchers from UQ's Energy and Environment Engineering group have almost halved the cost of capture and storage. Group leader, Victor Rudolph said the reductions in cost were due to the commercial value of the methane that was extracted from the coal seam, which the CO2 replaced.

"Geosequestration of CO2 into deep coal seams can reduce the net cost of capture and storage in Queensland by some 46 percent," Professor Rudolph said.

"The process reduces the costs down to \$25 per tonne of CO2 avoided, when applied to a large-scale 1400 MW coal-fired power plant." Principal researcher, Paul Massarotto said the cost-reduction technology was part of a research project nearing completion and supported by an Australian Research Council Linkage grant and six Australian and international organisations. The group is now proposing a joint project with Germany's leading research organisation into CO2 adsorption in coal, the RWTH Aachen University of North Rhine-Westfalia. www.uq.edu.au ■

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