



Boiler simulator to build crucial operator knowledge

Mishaps and accidents with sugarcane mill boilers can be dangerous and costly.

Serious damage and lengthy delays can quickly see repair costs and lost production value climb into the millions of dollars, according to QUT researcher Dr Anthony Mann.

As one way of improving training for new or relatively inexperienced operators, Dr Mann is currently undertaking a project to construct a boiler simulator to improve operator understanding at a basic level, and help form a foundation that could help avoid costly mistakes.

This project, funded by Sugar Research Australia, is looking to mimic some of the critical aspects of boiler operation and provide a product that has relevance across the industry.

"There are more than 50 boilers in the Australian industry, and boiler operating stations are very complex, so this project is providing something useful by looking at

common situations that arise in most factories," Dr Mann explained. "This is a relatively small project, so we are not providing a simulator that is specific to any particular boiler station."

He said that the simulator would be a useful tool for introducing people new to boilers (or those who have been away from boilers for an extended period) in a risk-free environment.

"We are creating a computer-based, entry-level simulator that will cover the basic concepts of boiler stations. The simulator is another tool that will be available to sugar mills to help avoid mistakes at this critical part of the factory. If it helps prevent one significant mistake, then the project will have paid for itself many times over."

The simulator would be complementary to practical and on-the-job training.

The project has recently been consulting with milling companies

to incorporate their feedback into the draft simulator. This builds on previous consultation with the sector in the early stages of development.

The project is aiming to produce the final simulator toward the end of 2018. ■

**For more information,
contact Dr Anthony Mann on
E a.mann@qut.edu.au or
T 07 3138 1333.**

(Above) This project is looking at common situations that arise in most factories to develop a useful simulator for training boiler operators.