

MEDIA RELEASE

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FSC's Rarawai's Boiler will get a new lease of life

FSC's Rarawai Boiler, built in 1979, is currently undergoing a major refurbishment and upgrade. Expected design changes to the boiler will essentially give it a new lease of life.



Above: FSC Head of Engineering and Capital Projects Martin Welch (at the forefront) and Project Manager Rarawai Mill Iliyaz Khan (closest to the camera) inspecting works at the Rarawai Mill's boiler.

Boilers are an integral equipment in most manufacturing plants and factories, for they convert water to generate steam, which then generates electricity which powers up the factory. FSC's Rarawai boiler was built in 1979 by Yoshimine Boiler Industry Co. Ltd of Japan. The five-drum, water tube boiler was designed

specifically for sugar processing and it uses bagasse, the dry, fibrous residue remains after the extraction of juice from the crushed stalks of sugarcane, as fuel.

“In other industries, boilers may use other raw materials as fuel, like rice husks, heavy fuel oil. Our boiler uses bagasse”, says FSC CEO Graham Clark.

This is the first major update work done to the twenty-two-year-old Rarawai Boiler since its inception in 1979. Three main areas of upgrade include the bagasse feeders, the air heater and the ash grate. Upgrades are being carried out both in the boiler’s mechanical (motor) and electrical (controls) components. Deteriorated parts and equipment are being replaced with new ones.

To manage the upgrade process, FSC through a vigorous tender process, secured the services of Avant-Guarde, an engineering consulting firm of Chennai, India. CEO Graham Clark says “Avant-Guarde has designed modifications to the boiler; they manufactured the new equipment and shipped it over here, and are now installing it”.

Avant-Guarde has a team of about fifty engineers and skilled tradesmen on site, currently working at Rarawai installing the new boiler.



Above: Avant-Guarde engineers working on some plans at FSC’s Rarawai Mill.

FSC is spending around \$9.3 million with the boiler upgrade, and the design changes are expected to improve and bolster sugar processing extensively at the Ba mill. The boiler’s new water treatment plant, which feeds water into the boiler, is now going to sit at an elevated two meters above ground because of the mill’s close proximity to water and susceptibility to flooding.

Clark says “when there is a flood, our guys are running around, taking out all the motors, lifting them to higher ground. With this new water treatment plant, they will not have to do that anymore”.

In terms of training for personnel for the upgraded boiler, there is not much change to how the boiler will operate. Clark says “the process is not unique, that our team will have to learn the process all over again”. But FSC does admit that there has been a significant drain of boiler operators who have gone on to pursue other opportunities both here and abroad. Hence skills built over time has been lost and the company is finding it challenging to replace these skillsets.

To mitigate this, Clark says “we are fast-tracking training for our team and assessing current skill levels and getting them certified with Australian standards. We have also initiated from this year, the Apprenticeship scheme, after a lapse of two years, in order to upgrade our people and enhance their skills and knowledge”.

And on a final note on Rarawai, the mill will now have two turbo generators, a 5-megawatt and 4-megawatt generator. During the crushing season, the factory demand sits around 5-megawatts. Clark says “after this Rarawai Boiler upgrade, we expect to sell a certain percentage of power back to the grid, so it should become a self-revenue-generating process for the mill and for FSC”.

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For more information, please contact:

Elenoa Korovulavula | Head of Strategic Communications | Fiji Sugar Corporation | Email: elenoa.korovulavula@fsc.com.fj |
Mobile: 999 6009