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Adrian Angus, who's had close to 30 years experience in the wheel and rim industry, has recently been appointed National Wheel Manager for Bridgestone Earthmover Tyres

Adrian is not new to Bridgestone, having worked for the company between the mid 1980s and mid 1990s at its Melbourne wheel division.

"I'm really excited to be back at Bridgestone at a time when our wheel and rim business is set for some significant changes as well as dynamic growth," said Adrian.

One of the main strategies for this is the recent establishment of a Bridgestone wheel- and rim-testing facility in the Hunter Valley providing customers with additional services to improve their overall wheel management efficiencies.

"Wheel and rim maintenance is an important safety issue for the industry, and without a regular testing program, a significant number of incidents and serious injuries could be attributed to wheel failure," Adrian said.

"Wheels and rims must be tested on a regular basis and the onus is on the end user to provide relevant information from a data collating program, confirming when the wheels are tested and the frequency of wheel maintenance.

"Our new Hunter Valley facility features the latest technology, which includes fine shot, blasting and magnetic particle testing designed to identify flaws in any of the sections before they fail," he said.

"An added advantage of the Hunter Valley operation is the location, which is close to the Hunter region's mining operations serviced by Bridgestone Earthmover Tyres."

According to Adrian, wheel failures generally result from one of three causes:

1. The rim is exposed to mechanical damage
2. High point loading due to fretting and or galling between metal to metal contact.
3. Corrosion.

"Our testing facility is designed to identify potential failure issues; with a regular testing program, wheel/rim life should increase significantly and at the same time safely maintain the integrity of the entire assembly," he said.

"Generally OTR wheels come in three or four sections, so if a section is deemed to be faulty, the section is simply replaced.

"I bring wheel and rim expertise to Bridgestone Earthmover Tyres, complementing the company's very successful business of supplying offroad tyres to the mining and construction industries," he said.



The photo on the left shows a rim treated with Seal-Zit once the tyre had been removed following several thousand hours of use; compare the surface quality with that on the right, which had not been treated at all.

The secret of Seal-Zit's success: effectively inhibiting rust and corrosion

Recently in Australia for Bridgestone Earthmover Tyres' annual sales conference was Morry Jones, vice president of sales with Fuller Bros, the manufacturers of Seal-Zit, the unique formulation additive that inhibits rust and corrosion in wheels and rims. Bridgestone is the exclusive distributor of Seal-Zit in Australia. Imprint spoke to Morry about the history of this product, and why it is still so successful 47 years after its introduction.



Seal-Zit was developed in the early 1960s by John Fuller, who owned a tyre shop on the Oregon coast of the northwestern USA.

"John came up with the formula in the early 1960s, when it was found that the new passenger car tubeless tyres wouldn't hold air well," says Morry.

"He developed Seal-Zit in conjunction with Firestone engineers, and began selling a few gallons at a time up and down the coast. Today, it's sold around the world."

The formulation has been unchanged since John Fuller first developed it, and it hasn't been copied to date – "and we are confident it won't be because of the process the chemicals go through to get there," Morry says.

He believes that applications for Seal-Zit are just as relevant today as they were 47 years ago – especially in the mining industry, where the product has been used for about 40 years.

"Its key attribute is that it inhibits rust in wheels, which is a major

concern in the mining industry.

"Once you get rust on the wheels, it's much harder to get the tyres off. Since we eliminate rust, it's much faster to pull tyres off," he says.

"An Australian mine operation reported to us recently that it only takes them one hour to pull tyres off wheels treated with Seal-Zit, compared with three hours using a competitive product. Those sorts of experiences have been repeated all over the world."

Fuller Bros was the first company in the world to develop a rust and corrosion-inhibiting tyre additive, and in North America, it still has 80% of the market. Applications include mining, construction, heavy transport, agriculture, and even some aviation applications.

The company's biggest efforts continue to be focusing on getting new business, expanding across a wider range of industries and markets; for example, recently it has started marketing in Russia and Ukraine.

However, Morry notes that in Australia in particular, the tyre additive products market has been commoditised, because there's a wide range of other products that claim to do a similar job.

"Really, this makes no sense for the mining industry," he says.

"When you consider that a mining tyre can range in cost from the tens of thousands of dollars to hundreds of thousands of dollars, plus the wheel cost – and Seal-Zit only costs \$6 a litre, why skimp on your additive?"

"The biggest tyres only take 60-70 litres, and the product lasts the life of the tyres – in other words, only a fraction of the cost of a tyre and rim, and look at the protection it gives.

"Why would you want to mess with that, and risk using a cheaper product that doesn't offer the same performance benefits?"

"We work very closely with the tyre and wheel manufacturers, and we are the only additive supplier that does that," says Morry.

"We frequently get requests from tyre and wheel manufacturers for samples they can use when testing and developing new tyre materials and compounds, to ensure that they are compatible with Seal-Zit."

Morry says the company's main challenge today is primarily a marketing issue: convincing the market of the benefits of Seal-Zit in expensive tyres and wheel assemblies.

“Seal-Zit is a very stable product, with an unlimited shelf life. We have containers that are 10-15 years old, and we can still use them.

“When you consider the constant heating and cooling of tyres in a heavy mining application, no product is more stable than Seal-Zit,” he says.

“It doesn’t break down; the chemical composition, PH balance and so on just doesn’t change. It simply prevents corrosive rust forming on metal.”

Morry has written recommendations from Bridgestone Corporation of Japan, as well as from Topy Industries, that Seal-Zit be used in conjunction with their tyres and rims.

“Seal-Zit is the only tyre treatment recommended by Bridgestone and by Topy; no other tyre additive manufacturer has these endorsements from the world’s leading suppliers of tyres and rims,” he says.

Additives ain’t additives. A competitive product to Seal-Zit did not prove very effective in inhibiting corrosion on this wheel.



Bridgestone’s Mackay branch has major upgrade

Bridgestone Earthmover Tyres’ Mackay branch recently underwent a multi-million dollar upgrade to better equip it for its role as Bridgestone’s head office for the company’s Northern Region and for future growth.

According to Glenn Jackson, Bridgestone Earthmover Tyres’ Executive Manager, Northern Region – which covers the whole of Queensland, with three branches at Mackay, Brisbane and Mt Isa – the refurbishment was a major undertaking for the business at Mackay to facilitate the servicing of Bridgestone’s major client base in the Bowen Basin.

It provides the company with a state-of-the-art facility that allows it to better meet the needs of its customers – including training, tyre repair, storage and distribution facilities.

“The refurbishment took 18 months to complete and involved the construction of 500 sq m of new offices and training rooms; once these were complete, the old offices were demolished to provide 3000 sq m for our warehouse and tyre repair facility,” Glenn said.

“Because the Mackay Branch services mines extracting the massive coal deposits in the Bowen Basin, considerable volumes of tyres are stored and despatched to the region’s mining industry.

“This new facility was necessary to ensure we maintain high levels of customer service and support and also to cope with the future growth being forecast in the mining industry,” he said.

The Mackay branch was also the first to offer a tyre repair service for

Bridgestone, and the new facility with its modern work stations is designed to enhance this element of the business.

“Our new tyre repair workshop is now the most modern in the organisation and features our latest tyre repair methodology and systems,” said Glenn.



Below, Bridgestone Earthmover Tyres’ modern new Mackay branch. Above, the new branch has one of the most modern tyre repair workshops in Australia.



Bridgestone VJT tyres for loaders and ADTs give increased comfort, longer life

Bridgestone Earthmover Tyres has released its new VJT tyre pattern, primarily designed for wheel loaders – but also suitable for articulated dump trucks – and providing increased operator comfort and longer tyre life.

The new tyre range is readily available in a range of sizes for loaders in the 10-30 tonne range and articulated dump trucks with operating weights of 20-35 tonnes.

It provides a number of benefits, including improved higher machine productivity operator comfort, longer tread life, full traction in both forward and reverse, and increased resistance to sidewall cuts compared with Bridgestone's VMT tread pattern.

According to Paul Comninos, Bridgestone Earthmover Tyres' Senior Manager, Engineering Services, the new VJT range is designed to deliver higher productivity, particularly in loading applications.

"Ideal for wheel loader operations, our VJT tyres have an innovative non-directional tread patterns – ensuring the same high traction moving forward or backward – for extra rimpull and productivity," he said.

"In addition, a larger tread volume compared with the VMT design results in significantly slower wear rates.

"This larger tread volume and slower wear rate gives extended tyre life."

The VJT tyres' sidewalls have been shaped to minimise damage from cutting, with cut resistance further enhanced by protectors to guard against tears and cuts due to heavy loads, said Paul.

"The new design also features more rigid sidewalls, meaning fewer sidewall cuts – again increasing tyre life – but also reduced vibration, for greatly improved operator comfort.

"Bridgestone's tyre design engineers have paid particular attention to reducing vibration – and therefore increasing operator comfort – through the use of two separate reinforcement systems designed to provide extra-low vibration," he said.

"The left and right centre blocks on the tread surface are connected by two tie-bars, which also increases centre-block strength for enhanced wear resistance.

"In addition, double-reinforcement tie-bars minimise the centre blocks' longitudinal elongation and deformation upon surface contact, reducing friction between the centre blocks and the ground, minimising irregular block wear and extending tyre life.

"And as the tyre travels along the ground, two specially designed vertical columns of centre tread blocks keep vibration at minimum levels," said Paul.

"Together, these translate to lower costs per hour or kilometre, through



longer tyre life, as well as reduced downtime through fewer tyre changes."

Bridgestone's VJT tyre range is available in a range of sizes, including 20.5R25* (loader only), 23.5R25 MS* and 26.5R25 MS* (loader and articulated dump truck).

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Bridgestone Earthmover Tyres Pty Ltd

223 Rookwood Road, Yagoona, NSW 2199.

Ph 1800 114 040. Fax (02) 9722 6199.

WEBSITE www.bridgestone-earthmover.com.au

EMAIL sales@bsem.com.au

For further information on any of the products or services covered in IMPRINT, please contact us at Bridgestone Earthmover Tyres, or your nearest Bridgestone outlet.

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