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BULK MATERIALS HANDLING PRODUCTS

Australian Export Coal Terminal Application

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2008 Supplier Of The Year
AUSTRALIAN BULK HANDLING AWARDS

Corporate Profile - Kinder & Co Established in 1985, Kinder and Co is a privately owned, family operated business serving the Bulk Materials Handling Industry in Australia and the Asia Pacific Region. Led by its visionary leader, Neil Kinder, the company today has grown to become a leading independent supplier and manufacturer of end-to-end solutions for the mining and manufacturing industry in Australia. Kinder and Co's influence and impact in the industry was recognised when they became the winner of the Supplier of the Year Award in the Australian Bulk Handling Awards 2008.

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The Challenge is always looking to improve the efficiency and profitability of the major coal export company. One of the areas to focus on was the conveyor system and how to make it safer, more reliable and improve its performance and uptime. In September 2008, Kinder & Co collaborated to implement a trial material that they hoped would tackle the challenge head on and revolutionize the transportation and conveying world as we know it. The material is the K-Superskirt and the trial raised some questions (and answers) to the age-old challenge of wear and tear that has repercussions in different areas of a mining and bulk handling operation.

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The conveyor system at the site is exposed daily to loads of exterme volume and weight at high belt speeds.

The Trial After many discussions and much brainstorming, it was decided to trial the material on the Coal Terminal to test the performance of the material (polyurethane) against the most commonly used skirting material, SBR Rubber. The transfer point that was chosen for the test was the point from the wharf conveyor to the ship loader. The specifications of the Conveyor transfer points are :Load of 6000 TPH (tonnes per hour)Conveyor speed of 5.2 m/s2400mm rubber conveyor belt width

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Here the old and new are tested side by side - which will prevail?

Observations Over the trial period beginning September 2008, teams have been collecting data and information to analyse and determine the comparative impact of using polyurethane against SBR rubber. From marketing info, the material features include:

•Made from high quality, high performance Argonics Polyurethane provides up to 10 times better wear life, High tensile strength, Low Coefficient of Friction Belt friendly, Pre-existing mounts and setup friendly, High abrasion resistant, High durability and lasts longer, Effective sealing and non-porous Chemical resistant

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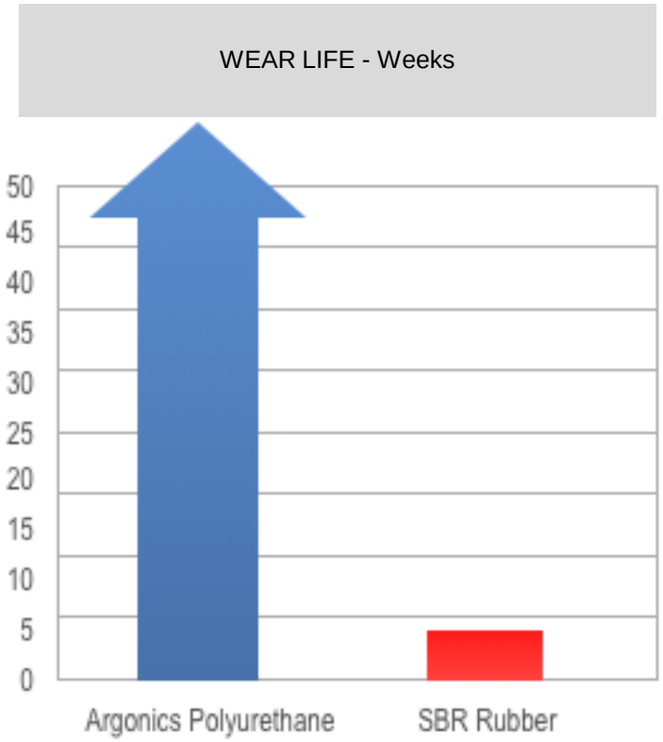

The trial shows that polyurethane is outlasting SBR rubber by 10 times, and counting

Trial Results The polyurethane skirting that was installed in September 2008 is still running as of June 2009. Compared to SBR rubber, the polyurethane superskirt lasts 10 times long. Further analysis on the 11th of June 2009 has revealed that the polyurethane skirting had only 1.5mm of wear at the time.

Further studies reveal that as the belt speed increased, the wear rate of SBR rubber increased exponentially whereas in the case of polyurethane, the increase was more constant due to its lower friction value.

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This revolutionary material is an innovation and creative approach to problem solving, engineered specifically to overcome the weaknesses of the conventional and outdated material of SBR rubber.

Conclusion

The ongoing practical trial has confirmed that the new material is far superior than its predecessor. As the trial and the skirting is still running strong, the teams are encouraged that the report so far has not yet concluded, but is already showing how much more effective, reliable, durable and cost-effective the new material is over its predecessors. The export coal terminal and Kinder & Co both hope that this revelation would help other industry players appreciate the value and innovation of this new material and solution and embrace more of its use to improve and revolutionize the mining and bulk handling industry.