



Plans for the World's first extra-large tyre recycling plant are finalised

The details of the world's first extra-large tyre recycling plant have now been finalised with the facility expected to open in Perth, Western Australia in June 2018.

The venture is a collaboration between the Tytec Group and Green Distillation Technologies, a global award-winning tyre recycling technology company. They have jointly established Perth based Tytec Recycling Pty Ltd to undertake economic green recycling of large tyres, referred to as OTR or off the road tyres, which are classified as those with rim sizes ranging from 25 to 63 inches and are used on the large mining dump trucks.

GDT has developed world-first Australian technology that will recycle end-of-life tyres into oil, carbon and steel using their 'destructive distillation' process. Transport of tyres from mine sites around Australia to the recycling plant will be undertaken by Tytec Logistics which has over 75% of the national OTR logistics market as well as providing storage for the extra- large tyres.

The plant, which will completely recycle the whole tyres and not cut or crumb the rubber, and will be located on the Tytec facility at in the Perth suburb of Welshpool. It will have a capacity of 5,000 tonnes of OTR tyres per year, which will amount to over 2 million litres of oil, approximately 2,000 tonnes of carbon and 1,000 tonnes of steel.

The Hyder Report in 2013-14 estimated that there are 155,000 tonnes of OTR end-of- life tyres of various sizes generated in Australia each year of which 79.4 per cent are left on site as currently there is no economic and green method of recycling them.

The recycling benefits are considerable as by using the GDT technology a tyre that weighs 3.5 tonnes will yield 1,500 litres of oil, 1.5 tonnes of carbon, as well as the steel reinforcing which can go back to the tyre manufacturer for reuse.

The actual cost of the plant is based on engineering estimates of \$8.5M and will be quantified once the final engineering and construction contracts have been determined. The OTR plant differs from a

conventional passenger/truck tyre recycling plant as the chamber will be ten times larger and consequently the material cost will be significantly higher.

Currently, there is no means of recycling OTR tyres, and the usual method of disposal in Australia is to bury them in a dumping area on mine sites, or in an EPA nominated dumping area. The GPS coordinates of the dump together with the serial number of each tyre disposed of in this way must be provided to the EPA.

Tytec Recycling Chairman Brett Fennell said that the OTR recycling process had the huge export potential for Australia.

“We attended MinExpo, the world’s biggest mining expo in Las Vegas last year and our process was the sensation of the show. We received enquiries from mining companies in Mexico, Columbia, Brazil, Canada, the United States and Chile and the market in these countries is immense as they all have large mining industries and no current economic green means of recycling their used OTR tyres.

“The construction of the world’s first processing plant for whole OTR tyres comes after more than twelve months of logistical research and development work undertaken at the designated Tytec Recycling R & Amp; D plant which is a section of the GDT facility in Warren, New South Wales. This work has been to develop a solution to the problem of handling a four-tonne tyre with a diameter of 4 metres or more through, a complex heat and chemical process at sufficient volume to make it economically viable,” Brett Fennell said.

He said that the construction of the OTR tyre recycling facility is an important step for the mining industry as up to this stage the problem was being buried for the next generation to solve.

“For us, as a company, it adds the final piece to the puzzle that will enable us to offer the mining and industrial sectors a complete a cradle to grave solution for OTR tyres by utilising a green economic disposal method.

“The environmental benefit of recycling very large and hard to handle tyres that have finished their useful life into high-grade reusable commodities such as oil, carbon and steel is an absolute world break through.

“As well as the Australian market for recycling OTR tyres, we believe that we can play a key role in helping to introduce this unique locally developed technology to the world,” Brett Fennell said.

Source: Queensland Mining & Energy Bulletin (<http://www.qmeb.com.au>)