Executive summary

Example of big tyres to be recycled:

Big Tyres (dia 1.4m to dia 2m)  Giant Tyres (dia 2m to dia 4m)  Construction tracks

Example of recycled products:

P.A.R.  Steel fibers  Fluff  Cleats

Tyres are among the largest and most problematic sources of waste worldwide. This is due to the large volumes produced and their durability.

The normal end-of-life car and truck tyres are shredded and eventually further grinded to grains and fine powder.

The economic breakeven point in this shredding is approximately diameter 1,4m. Then the cost of the energy required becomes larger than the sales price for the recycled products. That is also the reason why the laws and directives to recycle stop at this limit. Also the shredder machine builders have standard recycling machines for tyres approximate up to diameter 1,4m (practical dia 1,8m).

Of course there are several attempts to recycle these bigger tyres (up to dia 4m) but until now there is no suitable technique found.

We also could learn that a number of rubber products e.g. tracks, reinforced conveyors, fenders, etc have the same recycling problem. The producers know that they produce items that cannot be ‘destroyed’, but because there is no legislation to force them to take back and to recycle the EOL products they produce.

Only the Ultra-High-Pressure (UHP) water jetting technology is proven to be a valuable economical and ecological recycling solution. This BTRC technology is pulverizing the tyres in a fine reclaim (de-vulcanised) powder called Physical Active Rubber (P.A.R.) ready to be re-vulcanized.

Both BTRC findings, the recycling technology and the fact that the pulverized rubber is a reclaim powder, are world-wide unique.

To reduce the investment to some 5 mio euro including all start up operational cost ‘Capex and Opex’. BTRC management wants to start a new company to recycling tracks and make pilot installations as show cases for big/giant tyres and conveyor belts.

The main goals is the sales of this recycling know-how and/or support the potential new investors with a new start up.