BTRC

World Wide innovative process

1. Recycling of big tyres into
2. Reclaim rubber powder

Using: Ultra High Pressure water jetting

BTRC Gent Belgium  1.02.2018
Cutting & Crumbling Process

UHP water cutting
Side walls and tread

UHP water jetting // pulverisation
P.A.R. (Physically Active Rubber) powder and C.R.F. needles
Concept

Re-use of PAR Tyre

Tyre Production

Cutting

Crumbling

PAR

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World Wide innovative process providing reclaim in 1 step.

- SEM pictures (Scanning Electronic Microscope) approx 400 µm (40mesh)
- 2 grades: 1 from the tread and 1 from the side walls

Enlargement 1000 X
Steel wire (from tread and bead)

C.R.F. needles
Textile Fibers

Clean fibers
Short fibers
0.5% MC
Plant Info

Process protection by registration

Plant dimensions:
- 2500 m² indoor
- 2500 m² outdoor (tyre storage)

Utilities:
- Electricity: 2 MW installed
  - 0.92 kWh / kg powder
- Water: 75% water is re-cycled
  - 40 m³ / day fresh water

Production 3 shifts / 5 days
- Blue collar: 3 shifts = 14 men
- White collar total = 4 men
- Capacity 10,000 ton/y OTR
**Financial info**

- **Capacity:** 7,800 ton EOL tyres / year
  - PA.R.: recycled rubber (5,000 t/y)
  - Steel wire / bead wire
- **Turn over:** 5,300 k euro
  - Gate fee
  - Recycled rubber P.A.R.(5,000 t/y)
  - Steel wire / bead wire
- **Investment + running costs:** 10,000 k euro
  - Investments: 6,000 k €
  - Running costs: 4,000 k €

- **EBIT** 26 %

- **EBITDA** 46 %
Super tyres dia 4m

Cutting and jetting tests
Conveyor belts with steelcord

Test results
Rubber crawler tracks

Cutting and jetting tests