TOWARDS CIRCULAR ECONOMY OF TEXTILES JUKKA PESOLA

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PURE WASTE TEXTILES PRODUCES ECOLOGICALLY SUSTAINABLE AND 100% RECYCLED YARNS, FABRICS AND READY MADE GARMENTS

FOUNDED 2013

HEAD OFFICE AND LOGISTIC CENTRE IN HELSINKI, FINLAND

PRODUCTION AND DEVELOPMENT FACILITIES IN COIMBATORE, INDIA



MADE OF 100% RECYCLED TEXTILE WASTE.

15% of produced cotton is wasted every year during the clothing manufacturing process, enough waste to produce 3 t-shirts for each person on the planet.

This equals 38.5 billion litres of fresh water. With this amount we could provide drinking water to 25 million people yearly.









Our products are made of textile waste, leftover from the clothing manufacturing process.



We turn the fabrics into products that save huge amounts of fresh water.





We first sort the waste by colour then we refiber and spin it into new yarn.







This allows us to produce fabrics without dyeing and without use of fresh cotton.

PURE WASTE

CURRENT KNITTED FABRICS



WASTE	YARN (Ne)	FABRIC
COLOURED CUTTING WASTE + RPET	205', 245', 305'	S/J, RIB, TERRY FLEECE
ECRU CUTTING WASTE + RPET	205', 245', 305'	S/J, RIB, TERRY FLEECE
ECRU YARN WASTE + RPET	20S', 24S', 30S'	S/J, RIB, TERRY FLEECE

PURE WASTE

CURRENT WOVEN FABRICS



WASTE	YARN (Ne)	FABRIC
CUTTING WASTE DENIM + RPET	7S', 10S'	DENIM
CUTTING WASTE + RPET	10S', 16S', 20S', 30'S	TWILL, CANVAS
YARN WASTE + RPET	7S', 10S', 16S', 20S', 30'S	DENIM, TWILL, CANVAS, POPLIN

PURE WASTE

POST CONSUMER TEXTILE WASTE

WASTE	YARN	TEST METHOD
POST CO 20% / PRE CO 40% / RPET 40%	20'S NE	SMALL SCALE + BULK MACHINE
POST CO 40% / PRE CO 20% / RPET 40%	20'S NE	SMALL SCALE
POST CO 40% / PRE CO 40% / RPET 20%	20'S NE	SMALL SCALE
POST CO 30% / PRE CO 40% / RPET 30%	20'S NE	SMALL SCALE

NEXT STEPS

- BULK SCALE TEST
 - POST CO 20% / PRE CO 40% / RPET 40% MIX (2 TONS)
- BULK MACHINE TEST
 - POST CO 30% / PRE CO 40% / RPET 30% MIX (200-300KG)



KEY FINDINGS

- FUNCTIONAL CIRCULAR ECONOMY SYSTEM FOR THE TEXTILE INDUSTRY REQUIRES A PILOT PLANT
 - ALL TEXTILE WASTE STREAMS SHOULD BE MANAGED,
 SORTED AND PROCESSED THERE PROPERLY
 - TEXTILE WASTE SHOULD BE PROCESSED AT LEAST TO FIBER FORM



KEY FINDINGS

- COLLECTION, SORTING AND PRE-TREATMENT DETERMINE THE DIFFERENT POSSIBILITIES OF USE AND QUALITY OF THE RESULT
 - SORTING SHOULD BE MORE AUTOMATIZED FOR YARN SPINNING PURPOSES
 - SORTING BY QUALITY AND FABRIC CONSTRUCTION
 - SORTING BY COLOR
 - PRE-TREATMENTS REQUIRED FOR YARN SPINNING PURPOSES
 - CLEANING
 - REMOVING BUTTONS, ZIPPERS, HEAVY PARTS
 - OPENING TO FIBERS





PURE WASTE