

### SAVING WATER AND ENERGY WHILE INCREASING PRODUCTION EFFICIENCY.

The story behind Anubha Industries' successful sustainability program.





# PLAN FOR SUSTAINABILITY: REDUCE RECYCLE

We have an action plan that helps us reduce energy consumption, its sources, negates waste generation even further in the processes, and minimizes current eco-footprints while simultaneously balancing feasibility to do so. Our company aims at using only clean chemistry in our entire process by responsible sourcing using Blue sign approved products. This input stream management will restrict the entry of the harmful substances right at the beginning of the manufacturing process to achieve standards for an environmentally friendly and safe production. This will ensure that our products meet very stringent consumer safety requirements worldwide and also provides confidence to the consumer to acquire a sustainable product.

Conserving resources is imperative nowadays, and Anubha does exactly that by focussing on 3 key areas when it comes to production:

#### WATER | ENERGY | WASTE





## WATER



### We have saved 627 MILLION LITRES of fresh water over the last 3 years.

Our new sulphur dyeing method cuts down a significant amount of water and energy used. Our innovative process R E D U C E S the water consumption to 3.5 litres/kg from 12 litres/ kg is used for washing and oxidation process.

The dyed products made from this process are made using eco-friendly sulphur dyes.



We have installed a state-of-the-art caustic recovery plant, in which, caustic - a valuable chemical, is recovered from the effluent drain of the mercerizing process. In this process 90 % of the caustic is recovered and is REUSED back in the process . The recovered water separated from caustic is REUSED in the process resulting in chemical and water savings for the environment.

We achieve high recovery of caustic by using ozonation of the effluent caustic, reverse osmosis technology and multi-effect evaporators. The ozonation process eliminates the contamination by oxidizing to sludge and filteration with coarse membranes & micron filters. The use of chemicals to clean up the caustic is eliminated. Conventionally, the contamination keeps getting accumulated and after a few cycles has to be discarded to effluent.

#### WATER CONSUMPTION TREND





The fresh water consumption for the whole unit includes drinking water for drinking and cleaning purposes as well as water for the denim production processes.

Our custom-designed counter flow system reuses the water used in the production process, resulting in a considerable amount of process water savings over the year.

### 625 Million Litres

SAVED



# ENERGY



### We have saved 32 MILLION kWh of electricity over the last 3 years.

A number of steps are being taken to **R E D U C E** energy usage and ecofootprints, starting with optimisation of in-plant electrical power quality, installation of energy efficient lighting system, and machinery energy consumption is optimised by use of variable frequency drive systems and heat recovery systems in air compressors.

State-of-the-art equipment installed includes steam condensate recovery system, flash steam recovery system and waste heat recovery system on boiler and thermopacs that ensures that the energy produced is **REUSED** after recovery.



Our heat recovery system installed on air compressors recovers waste heat from the compressor cooling. Hot compressed air is cooled in heat exchangers by water. Hot water is generated (55°- 60° C) as an output of heat exchanger. In the conventional method of rejecting heat at the cooling tower causes loss of water in evaporation and consumption of power in cooling tower operations.



#### ENERGY CONSUMPTION TREND



OUR PRODUCTION UNIT HAS BEEN CONSISTENTLY ABLE TO REDUCE ENERGY CONSUMPTIONS TO A DIMINUTIVE AMOUNT OF 1.05 KWh / mt OF ELECTRICITY AND 0.68 kg/mt OF COAL. We have saved 27.5 MILLION kgs of coal by our heat recovery systems, steam condensate recovery system and waste heat recovery systems.



2015





2017







We care very much about the environment and aim to protect it by doing everything to minimize the waste produced.

Our process includes the introduction of advanced treatment systems to reduce effluent generated and an eco-processing route that **R E D U C E S** the other waste obtained.

#### Our factory also maintains

RESPONSIBLE LIQUID DISCHARGE by resorting to in-plant pre-treatment of effluent and ensuing further treatment involving sending effluents to CETP for wastewater management.



The installation of a waste heat recovery system on the Stenter machine and the caustic recovery plant helps recover and **R E U S E** whatever energy and by-material that is generated.







We at Anubha are proud to be part of such an organization that is so committed to nature, and socially and environmentally sound and aware of the problems we face in the world today.



Our textile products have received the certification from The Global Organic Textile Standard (GOTS), recognized as the world's leading processing standard for textiles made from organic fibres. It defines highlevel environmental criteria along the entire organic textiles supply chain and requires compliance with social criteria as well.



Our textile products have received the certification from the Organic Content Standard (OCS) tracks the flow of a raw material from the source to the final product and this process is certified by an accredited third party. It allows for transparent, consistent and comprehensive independent evaluation and verification of organic material content claims on products.



The STANDARD 100 by OEKO-TEX® is a worldwide consistent certification system for raw, semi-finished, and finished textile products at all levels, as well as additional materials used.



Our textile products have received the certification from The Global Recycle Standard (GRS), an international, voluntary, full product standard that sets requirements for the third party certification of recycled content, chain of custody, social and environmental practices and chemical restrictions.



The standard that holds all textile supply chain participants to meet contemporary ecological requirements that focus on reducing environmental impact, a holistic approach to Input Stream Management and sustainable processes.



Our Fair Trade Textile Standard is a certification developed to help consumers support products from only those farms that provide fair wages and safe working conditions, versatile processes. The criteria engages brands to commit to these fair terms of trade and holds them to a higher standard.

Constant innovation side by side with maximum production efficiency is what we strongly believe in. Hence we're always upgrading our methods and plants to house new methods of conserving resources.



# **VISION 2020**

Anubha sees itself paving the way for denim and fabric manufacturers across the country by setting high standards when it comes to sustainability.



Developing 25% increased responsible yarn sourcing of BCI cotton, organic yarns and recycled cotton and polyester is one of Anubha's paramount goals.



We also aim at a 20% decrease in energy and 25% decrease water consumption.



Lastly, we believe in reducing wastes by 10%, thus minimizing the environmental risks they pose.



We utilize the best raw materials for our products, which includes using the finest quality cotton yarn available on the market. We are working hard to acquire more of our materials from sustainable sources. At the same time, we are developing new and innovative eco-materials to produce denim and piece-dye in a sustainable manner, whilst always maintaining the highest standard quality for all our products.



CITY OFFICE C - 326, 3rd Floor International Trade Center, Majura Gate, Ring Road, Surat - 395 002, Gujarat - India.

PLANT OFFICE Plot No - 369, 371, 377 - NH8, Village & Taluka Palsana, Surat - 394 315, Gujarat - India.

CONTACT M +91 98247 00400 E akshat@anubhaindustries.com

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