

CHAPTER 1

TRANSFORMING OLD JEANS TO VALUE PRODUCTS

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INTRODUCTION

Jeans are in no way eco-friendly. They possess more harm to the environment than good. The production of jeans is highly hazardous. Its manufacturing entails chemical residues, heavy metals, strong bleach, chemical agents and so many hazardous substances that not only pose a threat to the environment but also endanger the lives of people by causing problems such as respiratory illness, loss of hearing, skin cancer as well as brain damage. Jeans is one of the most popular fabrics in the world, so the environmental damage associated with the production of jeans is very dangerous. Huge usage of jeans, makes it waste. So recycling is the best method to reduce the wastage. Recycling is the process of converting waste material into new materials and objects.

Recycled denims are a great and creative way to dress up while giving ones contribution to the environment as well. Recycled products have the lowest carbon footprint. So, it's time to recycle, reuse and reduce carbon footprints

WEALTH FROM WASTE

Waste are basically things that we have consumed and used its primary purpose, then after doing so disposing them accordingly. Examples of this are papers that we have printed for school purposes, tin cans from spams and other preserved foods, even the boxes that our pair shoes came from, and then those leftover foods from our meals that we decided not to eat because either we are full already or not in the mood to eat. There is this idea or thought

that 'There is wealth from waste'. It is quite common idea for most but to shed light to others it is called recycling. Recycling is an efficient way of maximizing the things that we have already used its primary use and then use it again for another purpose, which then continues the cycle of its use and make it not part of the increasing volume of waste. In one way, that there is a wealth in waste is first, if we respond to our waste in terms of recycling, we are getting the benefit of being thrifty, instead of buying other materials we can rely on our creative minds in order to work on things that we have. This kind of thinking, applies on crafty materials like school materials or making some arts and toys, or even inventions that can be found on old electronic things. Ideally, these concept resolves the problem on the continuous growing waste that humans tend to dispose but aside from that there is possible business that came out of it and certainly becomes wealth. One of those business arose, is the biogas power plant which with his kind of power plant is deems the usage of composite waste from human excrete & animal excrete in order to produce the methane gas that then is the raw material that the power plant needs to function generating electricity enough to power a neighborhood or even a small community.

Moreover, in sugar mill they are using the waste cane in order to fire-up their boilers to produce steam that is enough to generate electricity for their power plant. With these kinds of concepts there is an immense money that can be saved, thus can be used on other service or product. Also, recycling on waste like those of in used tetra packs of orange drinks or any fruit drinks have been converted on multi-purpose bags that can be used for shopping or for luggage plus the strength of the material used is capable to withstand great amount of load, roughly around the usual weight of grocery items, this makes the eco-bags or recycled bags economical while being environmentally friendly. In another point, there are business establishments that are called 'junk shop' in some places which buys scrap items ranging from thread of copper wires, any sort of metals may be steel, pipe or piece of aluminium, empty glass of bottles, old boxes, used papers including newspapers and old magazines. Those kind of shop buys them, then sort them up, give them value on certain scale like per weight or per pieces ,then after collecting them those materials are carried to different recycling plant making the materials of those considered waste be useful once more. Recycling, indeed have proven itself to be source of wealth in many various ways that is why we should encourage y people to consider their items before throwing or disposing them.

RECYCLING

Recycling is the process of converting waste materials into a new material and object. Recycling is the key component of the modern waste management. There are three R's reduce reuse and recycle.. Reuse is that taking care of our steps. Recycling is the conversion of waste materials into useful materials. Recyclable materials include glass, paper, metal, newspaper, plastic, textiles, clothes etc... Process of recycling includes collection, materials collected in recycling collect in collecting bins then processing which in Boat sorting materials into groups training them and getting them ready for manufacturing. Manufacturing step involved developing products from the already used products. Recycling has many benefits. Mainly the expected one is environmental protection. It reduces the contamination of risk from landfills reduce pollution because we convert a material which probably become waste into a new product of use. Also there is financial benefits, resource conversion, energy savings and community building.

TEXTILE WASTE

Wastage or waste can be defined as such kind of materials that don't come into use after the end of the process or the basic use of a product. It is one kind of worthless or useless or defective material. So, textile wastage can be defined as the material that becomes unusable or worthless after the end of the production process of any textile product. Wastage produces in every stage of the textile manufacturing process such as spinning, weaving, knitting, dyeing, finishing and clothing. Textile wastage is a great threat for any textile industry and the environment as well. When fibre bales are processed through the blow room section in a spinning mill a huge amount of cotton wastage produces. So, it is an economic threat. In a dyeing factory ton of fabric dyed and tons of wastewater is produced which is a great threat to the environment.



TYPES OF TEXTILE WASTE

Textile wastage can come from different textile manufacturing departments like spinning, weaving, dyeing, finishing, garment manufacturing and even from the consumer end.

Spinning Waste

Cotton fibre bale contains a lot of wastage such as foreign particles, dust, seeds, short fibres etc. and so when processed through different sections of a spinning mill then different types of wastage are produced in different sections. The wastage % in blow room is 3% and blow room waste is called lap waste. Carding section wastage % is about 10%. The wastage of carding section is called dropping-1, dropping-2 and sliver waste.

The wastage % in the draw frame section is about 0.5%. The wastage of this section is called sliver waste. The wastage % in the comber section is about 14-15% and the wastage are called noils, lap and vacuum waste. The % of wastage in the simplex section is about 0.5% and the wastage are called roving and sliver wastage. The wastage % of the ring frame is 2-2.5% and the wastage are called pneumatic, hard waste, vacuum waste etc.

Weaving Waste

Like spinning mills, different types of wastage are found in weaving mills also. Residual yarns which are left on the cones after warping are considered wastage. In the warping reel section, it is not possible to empty all the cones and there will always be a little amount of yarn left on the cones. Sizing waste is another kind of waste in a weaving factory. When in the weaver's beam section, a new set of warp yarn is started then it is necessary to eliminate some portions of the yarns to ensure that properly sized yarns are wound on the weaver's beam. After sizing wastage, comes the knotting wastage. Knotting is done to ensure all the warp ends of two beams are available for attaching together. Beam residual wastage is another kind of weaving wastage. When a weaver beam is finished, a small amount of warp yarn remains unused on the weaver's beam and it is not possible to finish yet. Auxiliary selvedge wastage is also a common weaving wastage. Auxiliary selvedge is a fake selvedge used to hold the weft yarn during the loom beat up period.

TEXTILE RECYCLING

The average lifetime of a garment is estimated to be for a period of three years. After the time period, they are thrown away as old clothes. Even useful garments are discarded as they are no longer fashionable, or desirable. A report states that more than one million tons of textiles are condemned every year. Huge quantities of old clothing end up in the landfill instead of being recycled and reused. Of the house hold garbage, textiles make about 3

percent by weight. Textile wastes also arise during the process of yarn and fabric manufacture, garment making, etc. They are called as post-industrial wastes. All thrown clothing has a potential for recycling and reuse. 80 percent of the textiles that are thrown away can be recycled and used again, whereas, currently only 25 percent being recycled. Less than 5 percent of all the garments that is thrown in the bin actually end up as waste.

Recycling Process

All clothing has a useful second life. The collected garments are sorted and graded as natural, synthetic and blended fabrics. Good quality clothing is sent to charity institutions and is used as second-hand clothing. Unwearable textiles are considered as damaged textiles, and are processed in the factory as rags. Rags are collected and sent to the wiping and flocking industry. Other materials will be sent for fibre reclamation and stuffing. Fibres from the old fabrics are reclaimed and are used for making new garments. Threads from the fabric is pulled out and used for re-weaving new garments or blankets. Both natural and synthetic fibres can be recycled this way. Incoming textiles are graded into type and colour. Initially the material is shredded into fibres called shoddy. Later based on the end use, other fibres are blended with shoddy. The blended mixture is carded, and spun for weaving or knitting. The garment is shredded for fillers in car insulation, roofing felts, loudspeaker cones, furniture padding, panel linings and many other uses. Woollen garments are sent to other firms that make fibre reclamation to make yarn and fabric. Cotton clothes are recycled and used for paper manufacture, automotive, and mining industries and various other uses. Some old clothes are being reused in a creative way by fashion designers to make fashionable garments and bags. Fibres made from recycled PET plastic bottles are used in the active sportswear market.

Advantages of recycling

Textile recycling helps in the protection of environment as well. Recycled clothes reduce the landfill space. Landfill sites pose a threat to the environment and water supplies. When it rains, water drains through the discarded clothes and picks up hazardous chemicals and bleaches. This water turns out to be toxic. Textile made from synthetic fibres will not decompose quickly whereas fabrics like wool releases methane, during decomposition and both fibres ultimately cause global warming. When these fabrics are recycled, this hazard will be reduced to a considerable extent. It saves on consumption of energy, as recycled clothes need not be re-dyed or sourced. Reduced usage of dyes and chemicals minimizes their manufacture and ultimately the adverse effects of their manufacture. Of all the old clothing, 70 % is used as second-hand clothing, 6 % is waste bags and zips, 8% is used for

reclaiming fibres and making recycled products, 7% is used as wiping material and the remaining 9 % is shredded and used as stuffing. It is a surprising fact that over 70 percent of the world's population uses second hand clothing. Raw materials acquired out of recycled fabrics cost less; making it an attractive feature for manufacturers.

Customizing own and old clothes

It is an amazing fact to know, that clothes that are considered as useless can be creatively used to make something new. Old clothes can be reused for making cushions, handbags, quilts etc. Damaged clothing can be used as rags and dusters. Bright coloured fabrics can be used for borders in a lampshade. Head and wrist bands can be made with fabrics with electrifying colours. Old garments can be transformed into works of art; like sewing patches, buttons and beads into old garments, ironing graphics, etc. From the early age of industrial revolution, textile industry is being identified as a major polluter of rivers. Attempts to minimise wastage are now on focus due to increased environmental awareness. Currently, there is an increasing awareness among people regarding waste collection and recycling. Developing a potential market for recycled textiles by buying such recycled products will reduce the wastage going to landfill.

CONCLUSION

Making wealth out of waste by utilizing old jeans and constructing them into value added products give motivation to recycle the resources. Waste are basically things that we have consumed and used its primary purpose, then after doing so dispose them accordingly. There is idea the "Wealth from waste". It is quite common idea for most but to shed light to others it is called Recycling. Jeans is one of the most popular fabrics in the world, so the environmental damage associated with the production of jeans is very dangerous because the number of jeans that consumers produce and use today is huge. Huge usage of jeans, makes it waste. So recycling is the best method for reduce the wastage. There are more benefits through transforming old jeans in to valued products. Reusing and recycling old items like fabrics, denim jeans prevents them from going into the landfill, and is a great way to reduce the use of raw materials and energy and to reduce air pollution, water pollution, and waste.

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