WET PROCESSING - ENVIRONMENTAL PROBLEMS AND POSSIBLE SOLUTIONS

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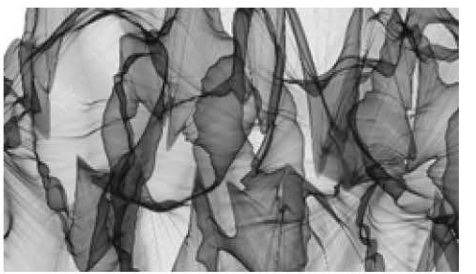
The textile industry is being considered as the highest polluting industry. We deal with dyes, chemicals to get beautiful colours on the fabric, finishes for functional properties like UV protection, anti-sweat, anti-static, inspect repellant, bacterial repellant and many more, we end up using materials that are harmful to nature. Many a times natural colours are not that easily available and they do not have the characteristics to retain the colours for many years. As a result of limitations to eco-friendly processing, the industry is opting for manmade chemicals.

It is a colourful world, the variations of colour shades around us are what makes everything more mesmerizing; in an era of so many possibilities of colour variants. A simple white itself has enormous shades to offer from snow white to rusk white. Then, we also have the effect created by the different fibre textures. With all these beautiful colors around, it becomes difficult to keep our garments plain and unprocessed. Colours cannot be kept away from textiles.



Moreover, we all know that today clothes are no longer just a fashion statement but has grown much beyond. It is the garment, that notthe one that feels good to the skin; is comfortable, breathable and smells good as well. Such high demands from a simple fabric need a lot of processing from aesthetic, comfort and functional properties.

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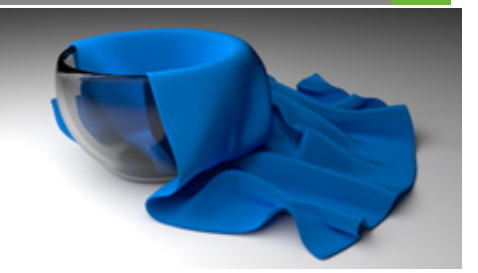
Wet processing specifically involves bleaching, dyeing and printing on fabrics. All these stages are heavily dependent on clean water sources already in scarcity around the globe. Moreover, these processes damage their reusability. These chemicals are harmful to nature and it is also difficult to segregate these dyes. It is difficult to strict by the environment policy of having effluent completely clear of colours and maintaining properties like ph, BOD and COD of the discharged water into the CETP. In absence of CETP, we need to have a zero liquid discharge (ZLD) installed. So there are many challenges in the textile processing.

Planets tracker report published recently gives shocking revelations that wet processing is requiring an estimated 430 liters of water to produce just one kilogram of fabric. There are solutions available for every problem. Talks of sustainable technologies, ecofriendly or organic processing is known to one and all. There are various niche markets or segments where the environmental impact of the garments is taken into consideration; however it is more of a pocket growth towards this direction than bulk practices being followed. More talks and less implementation is seen because of the difficulty of the pricing structure around it. It is the end-user demand that drives the market and hence until the top brands take responsibility for ensuring labels produced under them to be sustainable; it will always be a long road away. The manufacturers will opt for technology upgradation to more sustainable options, only when it is an absolute necessity and also when their investments yield a fair price. Availability of ecofriendly chemicals or using technology for the entire textiles value chain that will save on water, energy, waste, greenhouse gas emissions and process time. All these are being developed simultaneously and innovations are taking place at all stages.

In a step to help achieve a low carbon footprint for the textile industry, two leading textile chemical companies DyStar and RotaSpray have jointly developed Pad-Spray Steam (PS2 Process). It is a new continuous dyeing process without intermediate drying for woven cellulosic fibre fabrics with Remazol, Levafix, and Indanthren dyes, together with Sera auxiliaries. Huntsman Lanasol CE is a state-of-the-art chrome-free dye range that allows mills to discontinue the use of after-chrome dyes. According to the company, Lanasol CE outperforms traditional after-chrome dyes across the board – at every level of dyeing and processing.

Apart from the advances in dyes and chemicals; techniques like Plasma, ultrasonic, laser, biotechnology digital inkjet printing are the new innovated eco-friendly technologies. They offer more sustainable advantages to wet processing than the conventional methods. In these methods, there are fewer or no harmful chemicals, wastewater, and mechanical



hazards to the textiles and the environment. There are innovations in procedures and technologies across the various stages of wet processing from de-sizing, scouring, bleaching, mercerizing, dyeing, finishing to printing.

Conclusion

There is a need to understand that while we cannot live without dyes and chemicals in the present era; we need to also protect our environment. It is our responsibility that pollutants in liquid, gaseous or solid-state from our factory need to be completely harmless while discharging. To take care of this issue, we must produce chemicals that can dilute the toxicity of dyes and finishing chemicals. There has to be utmost care, while disposing off such waste from the processor; while opting for ZLD. We can minimize the impact by using the right types of chemicals and dyes from reputed companies. The cost saving on cheaper alternatives needs to be completely avoided if it demands a compromise on the environmental impact. The best way to tackle this issue is by collaborative solutions from retailers and manufacturers. A little initiative by retailers to provide the right cost for such processes and mandates, will ultimately lead to the utilization of the right chemicals that are a tick to the environment as well as a tick to the processors' pocket. Social compliance and Environmental compliance is the only way forward. Hence, the entire value chain should work on achieving it by utilizing eco-friendly dyes and chemicals along with sustainable technology.

Let us save our nature...to secure a brighter tomorrow!