

It's Not Impossible

With all the environmental issues in the world today, there is a greater demand for the use of sustainable products and practices. Screen printing is very popular in the fashion apparel industry, which is why there is a need for a more sustainable process. It is very important because people love to wear screen tees because they can show their personality through their shirt. For example, people who like to dress “urban” wear a lot of bold colored shirts with images of faces, signs, patterns, etc. Many little girls love wearing Disney princess t-shirts because they can capture the princess’s essence. In this essay, I will be discussing screen printing along with its sustainable alternative, direct-to-screen (DTS), also known as computer-to-screen (CTS).

Unfortunately, not everyone uses or knows about sustainable practices that are available to them. There are some uninformed people that feel that they have been doing the same thing for many years, so they are not aware that they can change their practice. They do not really know that they are harming the environment because they are not completely aware about the need for sustainability in the apparel industry. Presently, companies use films to transfer their images onto the finished products, which is not very environmentally friendly because the wasted number of films adds up quickly. Also, there are many “major chemicals that include screen emulsions, inks, solvents, and much more” (PNEAC) used to print the desired image onto the product, and it is a known fact that where there are chemicals, there is pollution. Lastly, the amount of money spent on all the equipment needed for screen printing is tremendous because the ink is expensive as well as the screens, which can be “two to ten dollars each with the disposal cost of about fifty dollars” (PNEAC). With each screen used in the process, there is a

significant amount of energy being consumed with lots of waste products. The screen printing industry is not doomed to be wasteful though because there are new possibilities.

In order to make the practice of screen printing more sustainable, a new process, direct-to-screen imaging, is readily available. Direct-to-screen imaging is becoming more accepted by different companies, and it is important since screen printed products are everywhere; it only makes sense for there to be a more sustainable practice. Considering some businesses consist of only screen printed products, such as t-shirts, using direct-to-screen imaging can attract a lot of customers, where they can enjoy a good quality t-shirt and help the environment at the same time. Also, less labor is required to create the screen printed product because “it can print a typical ten-color job within fifteen minutes while using film takes about an hour” (Sexton). In addition to having a sustainable quality product, the process of screen printing is faster and cheaper than before, which is important to the fashion industry since the speed and cost of creating a product is critical and affects the company. “While film costs about one dollar per square foot and vellum (for laser positives) is about fifty cents per 12"-x-18" sheet, the cost of consumables for CTS can be a little as four cents” (Sexton). The development of the direct-to-screen imaging system allows the result of a screen printed product to be cheaper and better quality.

Currently, the practice of direct-to-screen imaging appears to be the most environmentally friendly because it eliminates waste during production. First of all, the process replaces the use of films, so “no chemicals are used for processing; therefore, there is no need for storing or discarding the film afterwards” (Beckman). Because chemicals are removed, there are no toxins to harm the workers in the work space. Secondly, instead of using a massive amount of screens for each design, the image can be projected onto the product, which also eliminates

“consumables, such as wax and ink” (Fineline). The precision of the machine affects the amount of energy being used since there will not be as many mistakes to fix. And thirdly, the cost is greatly reduced because people do not have to spend money on buying screens and films anymore. It still requires the use of some energy and water because energy is needed to run the equipment and water is used to wash the product after it is printed. The difference is that there is not as much as before because there are no screens constantly stopping and starting.

This new sustainable practice is available for use for fashion companies now, but it is up to them to decide whether they want it though. Not many people have accepted this practice into their business yet because they either do not know about the benefits or cannot afford it. One of the downsides of adopting the direct-to-screen printing equipment is that “the automated press costs about the same” (Sexton), which would turn people off. The equipment may seem expensive, but business owners have to consider it as a good investment because the increased speed of the process will allow the company to create more products, which would pay off the cost quickly. Companies that have actually started using the direct-to-screen imaging do not know how they managed without it.

Fashion companies can easily transition from the former process to direct-to-screen imaging. Instead of using the “traditional photo-based large-format film positives for display applications” (Kiddell), people just have to put the picture on the screen, expose it onto the product, and then wash it. As long as the workers know how to use the direct-to-screen technology, they should be able to get good results. “The imaging systems allow printers to produce screens at warp speed; in addition to that, costs are reduced and quality is increased, which makes repeat jobs easier and decreasing exposure time” (Sexton). The reasons that are preventing people from adopting this new sustainable practice are the high costs and being

uninformed about the advantages and availability. Once people really learn about it, they can be more accepting and willing to switch systems.

After learning about direct-to-screen imaging, I feel that sustainability is possible with a practice as popular as screen printing. Many people think that it is hard to switch systems once it has been used for a long time, but they do not know that it is not too difficult to upgrade. Since screen printing is so popular and people like fast fashion anyways, direct-to-screen imaging is very useful. They can create new products quickly and efficiently without worrying about changing their screens and films. The next steps should be to educate as many screen printing companies as possible and to inform them about the choices they have. Many companies should really think of it as an investment that will greatly pay off. Also, people who create direct-to-screen imaging equipment should make it more accessible, so people are aware that it is out there for them to use. Our environmental problems cannot disappear overnight, but if everyone can try to do their own part, then maybe the issues can gradually improve.

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