



APPLICABILITY OF ADOBE ILLUSTRATOR® PROGRAM IN ACOMPLISHING TECHNICAL-GRAPHIC DRAWINGS IN THE TEXTILE INDUSTRY

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Abstract: *Using Adobe Illustrator® offers a multitude of possibilities for creating high-resolution graphic sketches, the details of which are well rendered and exemplified. This vector graphic program is increasingly used in the textile industry because the visualization of a concept is possible in just a few steps without the need to produce samples in advance, which makes it ease the work process and saves time. The program allows the modification of the sketch in terms of shape, size, color without quality loss. The graphic sketch made and presented in this paper is of a work trousers with protective elements, the model of work trousers is with adjustable waist, which allows comfortable wearing of the pants and allows the extension of the waist width by 10cm, with various pockets with useful functions, such as would be, pocket for yard tape, tools and writing instruments, also to the back pants is added an insert of reflective material. The main material from which the pants are made has the composition 65% Polyester 35% Cotton, weight 245g / m² and the finishing technology used for the main material is the dressing that is applied according to certain characteristics that are to be given to the fabrics. Computer-assisted graphics make it easy to translate creativity into a graphic sketch, allow You to create, describe details and improve the look of Your sketch by using a wide range of tools and effects. In this way the flow and information content for the actual production is optimized.*

Key words: *graphic sketch, work trousers, ADOBE ILLUSTRATOR®*

1. INTRODUCTION

The variety of the traditional clothing pieces and the complexity of the decorative motifs became very fast inspirational sources for fashion designer [1].

Adobe Illustrator® is one of the most widely used program in Computer Aided Graphics, with Illustrator being a professional-grade graphic art vector program. [2], [3]. Adobe Illustrator is an advanced vector-based program [4] [5]. In Illustrator, a line consists of two points connected by a computer algorithm, instead of a line of pixels. [4]. Any image or drawing can be transformed by specialized programs, so the user will always have creative freedom. [6]

2. DESCRIPTION OF THE MODEL FOR WHICH THE GRAPHIC SKETCH WAS MADE IN ADOBE ILLUSTRATOR®

The graphic sketch presented in this paper is of a work trousers with protective elements, the model of work trousers with adjustable waist, which allows comfortable wearing of the pants and allows to extend the waist width by 10cm, with various pockets with useful functions, such as would be, pocket for yard tape, tools and writing instruments, also to the back pant an insert of reflective material is applied. The main material from which the pants are made has the composition 65% Polyester 35% Cotton, weight 245g / m² and the finishing technology used for the main material is the dressing that is applied depending on certain characteristics that are to be given to the fabrics. The fullness dressing s used to give a mass and an increased gloss to the fabrics, non-wrinkle properties; water repellent dressing, the fabrics become impermeable to water, but remain permeable to air; for waterproofing, the fabrics become impermeable to water, vapor and air. Thus, the finishing technology used for the trousers presented in the paper is the fullness dressing to provide stability, gloss and non-crease. Another important component used in combination with the base material is 100% Cordura® Woven Nylon Reinforced Material.

Based on the woven nylon originally developed for military armor, the dense, robust CORDURA® fabrics are made of 6.6 nylon filament yarns with high strength and offer high resistance to tearing and abrasion.

Properties:

- Strong – excelent resistance to tearing
- Dense – tight woven fabric profile
- Luster/Sheen – 100% high tenacity (> 420D) nylon 6,6 bright filament

Fabric type: Woven – minimum 2x2 basket weave. Can be coated or laminated.

Ideal for use as luggage, bags, backpacks, equipment and accessories, and footwear. It is also used in motorcycle and clothing equipment.

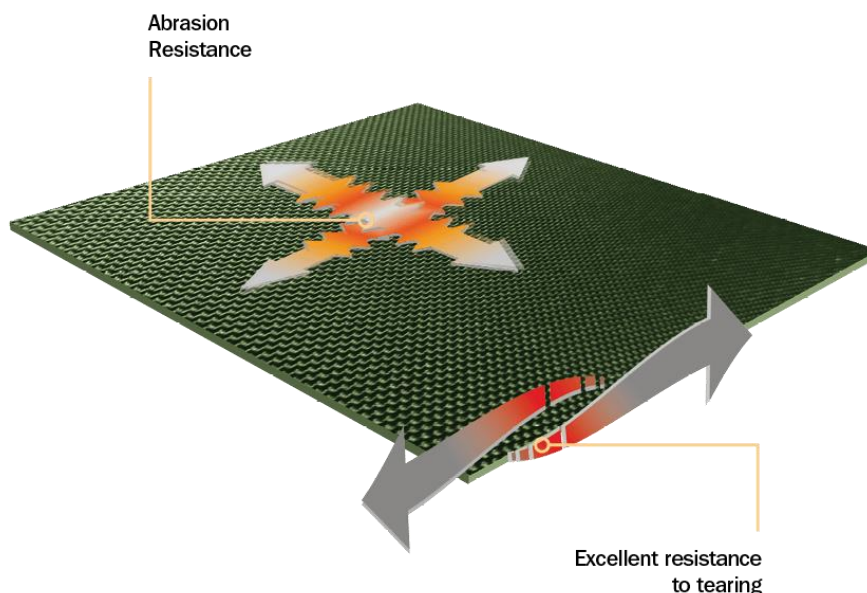



Fig. 1. Appearance and characteristics of Cordura® 100% Nylon material [1]

Properties:

- Excellent resistance to tearing
- Optimal strength-to-weight ratio
- Good abrasion resistance
- Water repellent – when finished/coated
- Long-lasting durability [7], (Figure 1.).

5. CREATING THE GRAPHIC SKETCH USING THE ADOBE ILLUSTRATOR® PROGRAM

To make the graphic, select the  *Pen Tool - the pen drawing tool*, it can be found in the toolbar on the left side of the workspace and draw an initial contour of the pants. Drawing the sketch will be done based on the steps 1-12 in the order mentioned in the sketch, Figure 2.

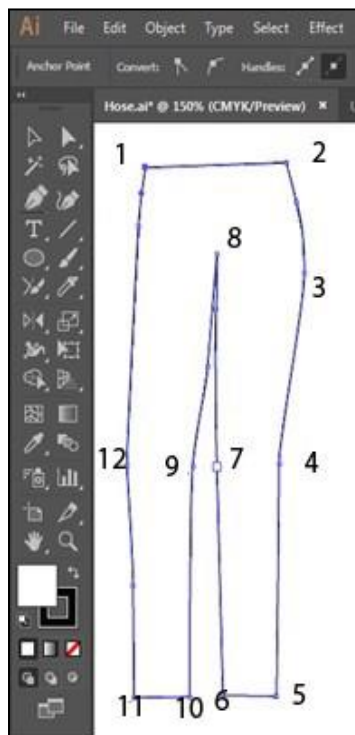


Fig. 2. Tracing the outline of the pants

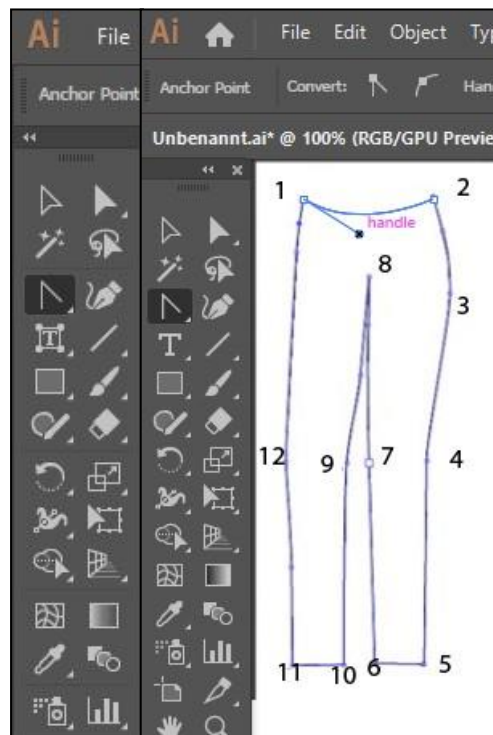





Fig. 3. Pants shape modeling

Thus by alternating use of the two tools,  *Pen Tool* and  *Anchor Point Tool* and the selection of the desired color, the final result is the sketch of the desired model, (Figure 4.).

To highlight the appearance of the material used for the knee protection area, in the sketch we can insert a .jpg file, which clearly shows its structure which denotes its characteristics such as high resistance to breakage and abrasion. This file is not made with the help of the graphics program but is the concrete picture of the material used. After selecting the image to be used, we open the image via the File / Open Command menu, the image will be displayed in a new document, by means of the  *Selection Tool* we select the image and transfer it in the document/work space containing the

graphic sketch. Once transferred, the image selection must be kept on so by holding down the mouse button on the image and with through the drag and drop we insert the image in the Swatches panel, (Figure 5 a, b, c).



Fig. 4. Sketch: work pants with protective elements

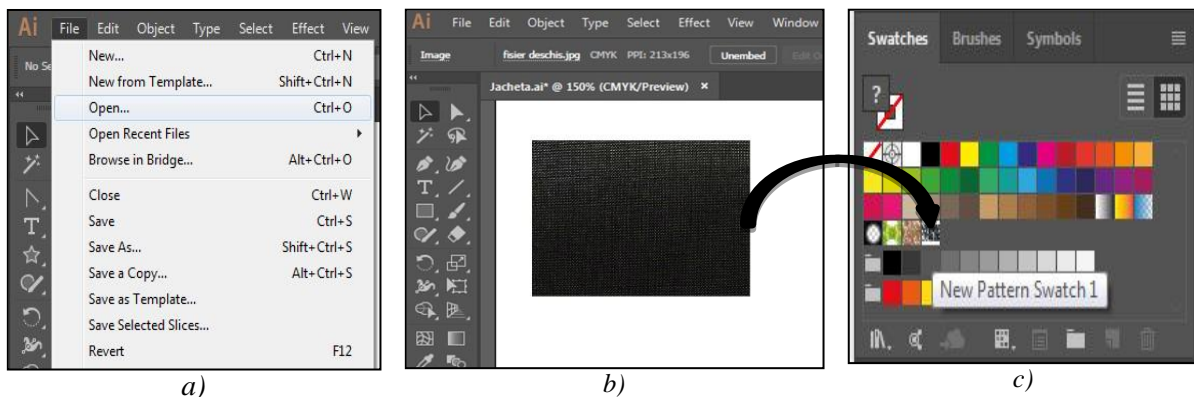


Fig. 5. a, b, c Inserting the image as a new swatch in the Swatches panel

The picture of the material, once inserted, can be used to stylize and finalize certain components of the graphic. The final appearance of the graphic is as shown in Figure 6.



Fig. 6. Appearance of the final sketch

5. CONCLUSIONS

The development of computer-aided graphic design programs makes it easy to translate creativity into a graphic sketch, allowing the creation, description of details and improvement of the layout of the sketch by using a wide range of tools and effects. In this way the flow and information content for the production is optimized.

In conclusion, it should be noted that the use of Adobe Illustrator® offers a multitude of possibilities for creating a high-resolution graphic sketch, its details being well rendered and exemplified. This graphic program is increasingly used in the textile industry because the visualization of a concept is possible in just a few steps without the need to produce samples in advance, which makes it easier to work and saves time. The program allows the modification of the sketch in terms of shape, size, aisle without losing its quality.



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