Yellowstone Impression

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Felting is a form of painting wherein the designer/artist is able to paint and draw with wool fibers to create lines, textures, patterns, shapes, and colors and emphasize values. Designers utilize all the natural advantages of raw wool fiber on felt: durability, retained flexibility after years of use, and biodegradability (Brown, Dent, Martens, & McQuaid, 2009). Due to its unique technique and textures, fiber artists and apparel designers put a great deal of effort into exploring and experimenting with diverse techniques and materials to create accessories, clothing, home decorations, toys, and even home furniture. Various techniques, such as needle felting, the main handcraft technique explored in this wearable art design project, are established and well utilized by fiber artists and designers to create their desired designs.

This design, *Yellowstone Impression*, was intended to integrate traditional handcraft techniques and innovative laser cutting technology to illustrate the connection between craftsmanship, technology, fabric expression, and the grandeur of nature. The challenges of this design were to aesthetically express the magnificent scenery at Yellowstone National Park (YNP) via a variety of handcraft techniques and the development of the silhouette of design components.

Yellowstone Impression is a design that is part of a larger collection inspired by the aesthetic of the national parks in the United States. YNP was the first established national park in the United States and the world, and is located in the western states of Wyoming, Montana, and Idaho. The park is well known due to its many geothermal features, wildlife, and vast forests with unique species of plants and grasslands. The colorways and silhouette of the needle felting designs on this wearable art piece were inspired by the Mammoth Hot Springs and overall beautiful landscape of YNP. The Mammoth Hot Springs is a large complex of hot springs on a hill of travertine located about 8km inside the north entrance to YNP. There are almost 100 hot springs scattered over a score of step-like travertine terraces, which are semicircular ledges formed by the deposition of travertine around slowly rising pools. Due to its unique terrain features and temperatures, algae living in the hot springs have tinted the travertine shades of brown, orange, red, and green, which are the main color ways used on this design.

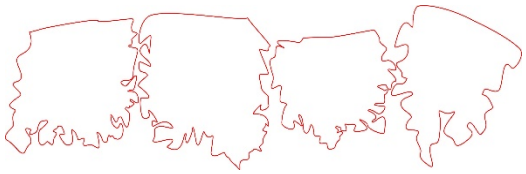

Figure 1. Outlines of the travertine terraces.

This project started with fabric embellishment experimentations: needle felting and laser cutting. 100% pre-felted wool felt (natural and black colors) and 100% Merino wool fibers (turquoise, sky blue, green, yellow, brown, orange colors) were chosen for this design. The colored Merino wool fibers were mixed and laid across the surface of the natural color wool felt. The wool fibers were needled through the pre-felted layer using a 12 needles Embellisher needle felting machine. The needle felted swatches were laser cut by a Trotec Speedy 400 laser cutter using a particular setting (Power: 100, PPI: 1000, Speed: 1). Once the colorways and laser cutting setting were finalized by the designer, the shapes of the laser cutting pieces were developed. The outline shapes of each layer of the step-like travertine terraces were traced in Adobe Illustrator from photos the designer had taken when she visited the park (Figure 1). Merino wool fibers in turquoise, light blue, and green colors were carefully laid out and needle felted on the natural color felt at 36 inches wide and 10 inches long. The needle felted pieces were then laser cut into a variety of "terrace" shapes. In order to add the depth of the "terraces" on the felted pieces, natural color and black color felt were also laser cut to mimic the tiers and shadows of the step-like travertine terraces (Figure 2).

Figure 2. Laser cut needle felt pieces.

Figure 3. Hand beading on the dress.

The main body of this design is an A-shape dress made out of 100% black wool felt with a sweetheart neckline connected with 100% black silk organza on the shoulders. On the wearer's left side, the designer needle felted an irregularly shaped circle to mimic the springs of Mammoth Hot Springs using brown, orange, green, blue, and yellow Merino wool fibers. On top of the needle felted circle, matched colors of 1/8" round glass seed beads were hand sewn to represent the hundreds of animals, and birds documented at YNP. The beads also enriched the surface of the felted area and highlighted the colorways of the design (Figure 3). The laser cut "terrace" pieces were draped on the front and back neckline and shoulders and then hand attached as a separated shoulder piece with the silk lining on the back. The light blue glass seed beads were hand sewn on certain pieces to highlight the blue colors. The "terrace" shoulder piece was then attached along

the neckline of the dress. Two openings were constructed on the center back neckline using black metal snap buttons and the wearer's right-side seam using an invisible black zipper.

This design demonstrated an innovative way to combine a traditional felting technique, needle felting, and laser cutting technology to create wearable art. The felted components on both the shoulder piece and dress successfully illustrated the vivid colors of the hot springs. Laser cutting technology accurately reproduced the shapes of the travertine terraces and mimicked the step-like appearance via the layers of felt. This design achieved the goal of expressing the aesthetic geothermal features of Mammoth Hot Springs and nature scenes of YNP through the handcraft techniques, silhouette of the garment, and innovative technology.

References:

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