

Tears of Volcano

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On May 17th 2018 at the local time of 4:15 a.m., the Kilauea Volcano located inside the Hawaii Volcanoes National Park in the U.S. state of Hawaii erupted. At least 23 fissures opened up in the ground after a series of earthquakes forced over 2,000 people to evacuate (Reardon, 2018). According to Hawaii News Now, at least 700 homes were destroyed by the lava of the Kilauea Volcano. The designer of the *Tears of Volcano* was astonished by the destructive power of nature and inspired to create an apparel design in admiration and awe of nature. Thus, the goal of this design, *Tears of Volcano*, was to represent the rare scene of the Kilauea Volcanic eruption and the magnificence of nature. The challenge of this design was to aesthetically illustrate volcano eruption and lava via textile designs and a wearable art piece utilizing digital textile printing, laser cutting, and handcraftsmanship.

The Kilauea Volcano is one of the world's most active volcanoes. Kilauea is also glorified as the scared home of the goddess Pele, the Hawaiian goddess of fire, lightning, wind, and volcano (Pamela, 2012). The textile and silhouette of this design were inspired by the power and brilliance of lava and the story of the goddess Pele.

This project started with textile design. Two non-copyright photos of the Kilauea volcano lava were obtained from the internet. The goal of designing the textile patterns was to emphasize the contrast of the black and bright colors to demonstrate the texture of the dried lava, ash, fire, and hot lava. The designer used Adobe Photoshop to adjust the hues of the photos to achieve high contrast and necessary colors. The resolution of the photos was increased to 300 dpi. Two images were blended into one. The bottom image was set up as blending mode into *Lighter* color mode. The outline of the top image was selected using the *Rectangular Marquee* tool and then the selected inverse area was deleted. The merged image was then flipped vertically to become the initial motif. The designer repeated the previous steps and flipped the images horizontally to create the single repeat pattern, as shown in the Figure 1, which was transferred into Lectra Kaledo Print 64 V4R1 to modify the colors and create repeat patterns. There were two color ways of the repeat print. The dark brown and black colors of the linings express the sadness caused by environmental damage and destruction of human livelihood.

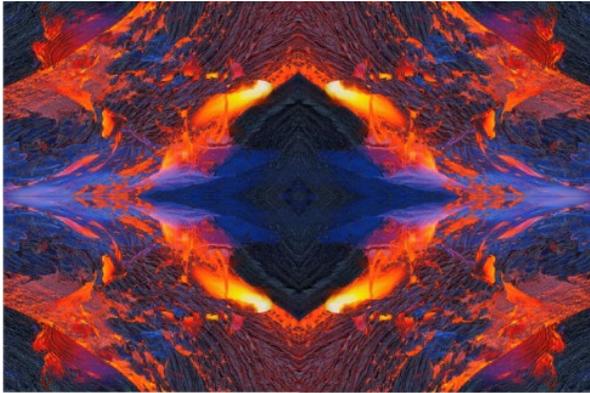


Figure 1. Textile single repeat.



Figure 2. Engineered dress patterns.

In order to reduce fabric waste, the prototype was draped on a size 8 half-scale women's dress form. The designer constructed simple shapes with straight and curvy lines to depict the stiffness of lava stones and lava ash. The extended arches formed over the shoulders and the skirt are inspired by the lava tube on the Hawaii Island, also embodying humanitarian protection during unstoppable natural disasters. The half-scale garment patterns were digitized into the Lectra Modaris Classic 2D V8R2 to scale up to the full-size patterns and modify the accuracy of the patterns. The lining of the dress and inside skirt patterns were created by the Modaris. The full-size patterns were exported into DXF format and then opened and edited in Adobe Illustrator. The repeat prints were engineered onto the pattern piece in Adobe Illustrator. Bright color prints were printed on marble velvet fabric, as the natural shimmery texture of the fabric enhances the aesthetic of the bright colors. The dark color prints were printed on silk charmeuse to give the wearer a luxury wearing experience. In order to emphasize the details of the textile design, the laser cutting motifs were traced from the repeat print and then laser cut on the front center panel using Trotec Speedy 400 laser cutter (see Figure 3). The most fun and interesting experience in creating this design was in making the manifold layers around the chest areas. The layers that were constructed with 1-inch bias tapes cut out of the dark red silk organza. The bias tapes were folded in half and ironed flat. The designer hand stitched all the bias tapes along with the folding line onto the lining of the chest areas. There was about a 1/8" gap between each tape. Every other bias tape was cut short to shrink the volume of the bias tape tails around the waistline. Red glass seed beads were hand embroidered between the bias tapes to enhance the texture of the manifold layers and added a shiny contrast to the organza. The layers of the bias tapes and the tape tails represent the erupting and melting hot lava.



Figure 3. Laser cutting patterns.

Digital textile printing and laser cutting technologies facilitated the successful conversion of nature photography to the wearable art design. The silhouette and color design illustrated the magnificence of the volcano eruption, and its consequential destruction of environment and human livelihood. It is the designer's believe that humanity must embrace humbleness in front of nature. This design demonstrates how the synergy of inspiration, color, pattern, textile and silhouette express the design's feeling of a drastic natural event.

References:

- Pamela, F. (2012). *The burning island: Myth and history of the Hawaiian volcano country*. San Antonio: Trinity University Press.
- Reardon, S. (May, 2018). Hawaii volcano holds clues to other eruptions. *Nature*, 557(7706), 477.



Image A: Full Front View



Image B: Full Back View



Image C: Side View

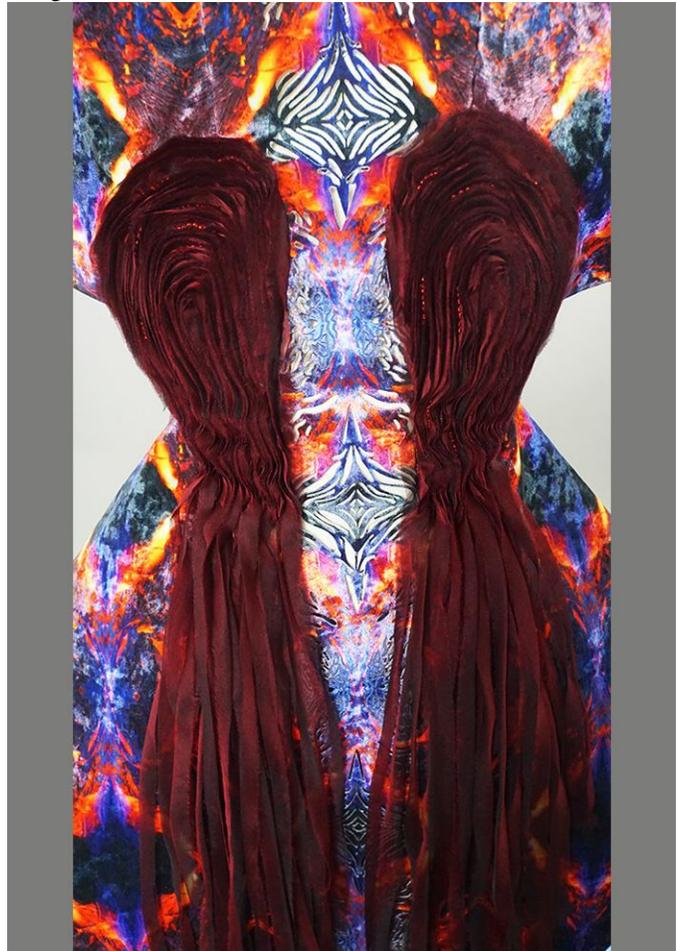


Image D: Interesting Detail