Amanda Barnes 810231515 November 8, 2007 ARTS 4017-004 Flow Visualization

Team Gamma Project #2

These photographs are from Team Gamma's group project #2. During this project our team worked with fire and the different color flames created from different

salts and metals. We also experimented with lighting a tightly wrapped plastic bag on fire. My two

photographs represent both of these processes. Photo DSC 53791913.jpg





shows the sparks coming off of a copper wire when it is heated with a torch. Photo DSC_56723.jpg shows pieces of the lit plastic bag as it falls into a bucket of water. For the rest of this report I will be focusing on the first image since I believe Vanessa will be covering the other process in her report.

As I mentioned before this image is of a copper wire placed in the flame of a torch. The wire was twisted in hopes that the denser the metal the more likely we were to get the results we were looking for. When we first attempted the burn the copper we expected it to create a green flame, unfortunately it did not. However as the wire burned down and began to shrivel up it created interesting sparks which are captured in this image as well as pieces of hot wire as they fell from the torch. When photographing images sure as this it is essential to have a tripod in order to get a clear image. However

because you are basically photographing the movement of fire the images will not be sharp as a result of the motion blur. There were no lights or flashes used in these photos, all of them were captured using high ISO, large apertures, and long exposures.

The camera used when making this image is a Nikon D40X digital SLR. This camera has 10.2 mega pixels which captures 3,872 x 2,592- pixel images. The lens' total range is 18-135 mm, f/3.5-5.6. The size of the field of view in this image is 5 x 7 inches and the distance from the object to the lens was about 4 feet. The settings for this image are an aperture of f/5.6, shutter speed of 1/6 second, and ISO of 3200. There were only slight manipulations made to this image including cropping, a decrease in exposure, and a slight increase in saturation.

I really like both of these images and that is why I chose to submit both of them. I wish that they could have been sharper but I know that is not possible otherwise the photos would be showing something very different. I think that both of these images clearly show fluid physics by displaying the path in which the objects are moving. I wish I was able to understand the physics of these photos better but it seems that I may be a lost cause. I think that both of these images could be expanded further. One thing that I could change is placing some thing in the image that was in focus to show the viewer that the photos are in focus and the image is displaying movement.