



**Fig. 4.** Examples of removing the flame region from images (a) Input images (b) Reduce brightness images (c) HSL images (d) YCbCr images (e) Median images (f) Otsu images (g) Find the edge images

Figure 4(a) shows the raw images. Figure 4 (b) shows the images

**Fig. 5.** Detection of flame movements on video (a) Input frame, (b) Reduce brightness, (c) Motion detection and mark pixel with red color (d) Red color filter

Figure 5 (a) shows the frame image taken from the video. In Figure 5 (b), there is an image of the same frame with the brightness reduced by 50%. In the image in Figure 5 (c), the current frame and the previous frame are compared and different pixels are marked with red color. In order to better understand the moving regions, the image was passed through a red color filter. Figure 5 (d) shows the red color filtered image of the frame. By looking at this image, a decision can be made about the presence of the flame.