



Video and 3D Measurement Services

Taking Data Capture to New Levels

Stress Engineering Services has a line of Video and 3D Scanning Technology services that enhances its already well-renowned measurement, analysis and testing capabilities. This range of services offers a variety of advanced photo, video and 3D measurement that can accurately document, measure and analyze your project onsite.

FIXED POSITION LASER SCANNING

Laser scanning and photogrammetry scanning are the ideal choice when the objects are large; such as cars, drilling risers, storage tanks, and pressure vessels. Laser scanning's portable nature enables fast, straightforward and accurate measurements of complex structures, production facilities and crime scenes. Photogrammetry modeling is ideal for adding data to a model that is not accessible by conventional means. The method enables reliable evidence preservation, accident reconstruction and has uses in architecture and construction and industrial manufacturing.



- **Distance accuracy: approximately .04 in**
- **Range: 230 ft**
- **Photo realistic point coloring**

HANDHELD METROLOGY GRADE LASER SCANNING

Handheld laser scanning produces fast, accurate, metrology grade portable and high-resolution imagery of the finer details of an object. The method is optimized to meet the needs of product development and engineering professionals acquiring 3D measurements of physical objects less than 12-15 ft in size to record or preserve an object received or after testing.

Handheld laser scanning is a more accurate method than fixed position laser scanning or photogrammetry and provides a model of an object that an engineer can then analyze with pin point accuracy to determine the size of any abnormality, such as the depth of any corrosion or amount of crush the object has been subjected to.



- **Approximate scan area of 10 in x 10 in**
- **Mesh Resolution up to .004 in**
- **Recommended part size: 4 in to 13 ft**
- **Accuracy: .001 in**

360° PANORAMIC PHOTO/VIDEO

Frequently, inspection, failure, or evidence preservation needs to be carried out in areas where access is limited by either physical space or hazardous conditions. With our 360° Panoramic Photo/Video capabilities, clients can obtain a highly detailed view, which realistically simulates being at the location, inside the test or at the area of failure. The technology is also capable of being mounted to our drone for a full 360° aerial fly through and its small frame enables the video to gain access into tight spaces.



HIGH SPEED VIDEO CAPTURE

When testing involving high-speed motion occurs too quickly for the eye to see, our High-Speed Video Capture services can help to slow things down, so no micro-event is missed. With a combination of fast recording speeds and high-quality image resolutions, the High-Speed Video Capture services provides an unparalleled sense of realism, making the capturing of events such as component failure in slow-motion, easily achievable.



Traditional methods involved digitally slowing down the footage in post processing, limiting users to 60/120 or 240 frames per second. In comparison, our high-speed video image quality / frame rates are much faster, providing an unparalleled sense of detail.

DRONE PHOTOGRAPHY / VIDEOGRAPHY AND SCANNING

Any testing or inspection project where evidence needs to be collected from a bird's eye perspective will require a drone. Drones are lightweight, agile and a far more economical option than the use of a helicopter and pilot or bulky camera jib and crane. Our drone photography / videography allows for the capture of magnificent aerial shots in stunning color and detail. Although flight restrictions apply based on location, our drone can also be used for the collection of photos, videos and data to create a 3D model using photogrammetry or for accessibility when there are physical or health hazard restrictions.



HD VIDEO

Many inspection, failure, or evidence preservation scenarios require high quality imagery to effectively capture vital details. Since true High Definition (HD) video cannot be achieved via smart phones and other mobile devices, we provide HD video in various options depending on the application required. HD monitors give the ability to remotely monitor situations in real-time and can be filmed from one or multiple angles, providing users with reliable and accurate footage that can stand up to the high levels of examination required.



13800 Westfair East Drive ▪ Houston, Texas 77041
Phone: 281.955.2900 | Fax: 281.955.2638

visit us on the web at www.stress.com