National Aeronautics and Space Administration

Oxygen Systems Testing and Analysis

The NASA JSC White Stands Test Facility (WSTF) specializes in the study of oxygen compatibility in space, aircraft, medical, and industrial applications. We investigate the effects of increased oxygen concentration on the ignition and burning of materials and components used in these applications. When high-pressure oxygen is present in an application, there are fire hazards that must be assessed and mitigated to ensure personnel and system safety. Fires have occurred in space, such as in the Mir Space Station, and in aircraft life support, medical applications, aerospace applications, construction materials, and oxygen production. Typically, fire hazards are associated with the presence of ignition sources and with materials incompatibility.

Unique Facility Offerings

- Large Buffer Zone and Controlled Remote Property for Hazardous Testing
- Moderate Desert Climate Ideal for Year-round Testing
- Existing Environmental Permits in Place for Hazardous Testing

Johnson Space Center

Services Provided

At WSTF, we perform compatibility assessments to identify potential problems within oxygen systems. We test materials and components to determine their suitability for use in oxygen systems. We also perform post fire failure analyses to identify the cause of a fire and can recommend design criteria to avoid future problems.

Fire Hazards in Oxygen Systems

Fire Hazards in Oxygen Systems, a two-day course aimed primarily at those who design systems, was the 1998 Recipient of the Education Award for Excellence from the American Society of Association Executives.
The course is taught by WSTF personnel at NASA centers and other facilities worldwide and can be customized to the specific needs of any oxygen user.

Oxygen Systems: Operation and Maintenance

Oxygen Systems: Operation & Maintenance is a half-day course designed for those who assemble, operate, and maintain oxygen systems.
The course is taught by WSTF personnel at NASA centers and other facilities worldwide and can be customized to the specific needs of any oxygen user.

We have developed customer-friendly agreements to streamline business relationships and are eager to share our unique facilities and expertise with new customers. We invite your inquiries regarding application or adaptation of our capabilities to satisfy your special requirements. Briefings on general or specific subjects of mutual interest can be arranged at JSC or at your business site.

For the benefit of all

www.nasa.gov

For more information:
http://jsceng.nasa.gov

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