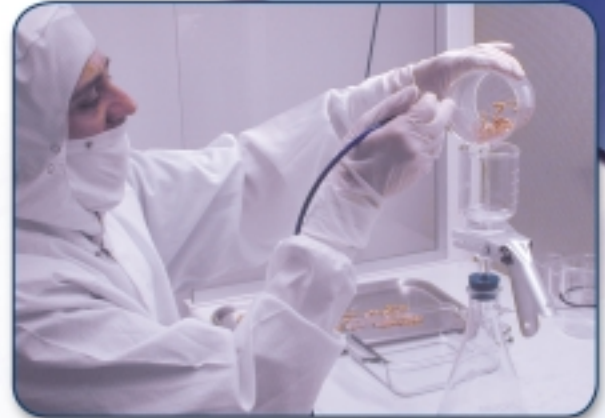


Specialists in Precision Cleaning, Satellite Testing

National Technical Systems, NTS, is a world leader in assisting organizations to access domestic and international markets. We are a single source for a full range of integrated engineering solutions, product testing, standards compliance, technical resources solutions and managed services. Globally accredited by leading regulatory agencies, NTS can provide cost-effective programs to meet your requirements at one of our many U.S. or international facilities, or we can provide onsite solutions. NTS is the nation's largest independent standards compliance and product testing company serving companies within the aerospace, defense, automotive, telecommunications, electronics, power, medical device, computer, software and financial markets.



With various Class 100 to Class 10,000 clean rooms, NTS can handle devices ranging from a few millimeters in size to cryogenic valves weighing more than 7,000 pounds.

Precision Cleaning

NTS has extensive capabilities in the precision cleaning of component parts, assemblies, piping, pressure vessels, heat exchangers and an array of other space hardware. Other processes include pickle and passivation, deoxidation, cryogenic testing, helium leak testing, pressure testing, vacuum bake out, and an incredible number of other ancillary specialized services. NTS services range from commercial-oxygen clean to ultra high purity processing, including analysis for particles and non-volatile residue on virtually any material including stainless steel, aluminum, titanium, beryllium and modern composites. NTS also provides specialized packaging of cleaned and tested hardware.



NTS assists in the evaluation of long-term satellite reliability and performance when exposed to space and solar conditions.

Satellite Testing

NTS leads the industry in testing associated with satellite technology. For fuel cells, solar panels, composite antennas, batteries and various mechanical and electronic devices, NTS can custom engineer chambers and fixtures to conduct a complete range of space related phenomena. Capabilities include vacuum, space simulation, vibration, shock, acoustic noise, acceleration, bakeout, thermal cycling in large (drive-in) chambers (including photogrammetry and low oxygen capability), aging at 125° C/minute transition rate, structural, pressure, helium leak and EMC.

Environmental and Dynamics

NTS LAX is a full service environmental test facility capable of managing your environmental test programs, both commercial and military. Our technicians and engineers are recognized experts in the performance of a wide array of environmental simulations including space, thermal, shock, seismic and vibration.



Transportation, aircraft and spacecraft vibration and shock conditions can be simulated and combined with environmental parameters such as thermal shock to validate product reliability.

Engineering Service & Technical Resources

From generating specification requirements and user profiles for next generation transmissions to the enhancement and characterization of environmental platforms, NTS has provided engineering and field services to the automotive industry since 1982. Making our technical expertise and experience available to our clients, when and where they need it, is our differentiator. We have dispatched technical teams to provide Asset Management Services at our client sites. We've provided data collection for field performance and instrumentation of automobiles for road testing. From finite element analysis for modeling simulation, and compliance to the new federal requirements for pressure measurements, to tests that support vehicle stabilization and

Dynamics

Highlights

At LAX, combining electro-dynamic vibration and controlled environments simultaneously is routine. Capabilities include: sine, random, sine on random and synthesized shock.

Primary Specifications

MIL-STD 810, MIL-STD 202, RTCA D0160, ISTA, ASTM

Environmental

Highlights

A large selection of temperature/humidity chambers; temperature/altitude chamber up to 60,000ft., space simulators; acoustic noise, salt fog, sand and dust chambers; solar load test; and thermal shock chambers (air-air and liquid-liquid).

Primary Specifications

MIL-STD 810, MIL-STD 202, RTCA D0160, ISTA, ASTM, NEMA

Precision Cleaning

Facilities

FED-STD-209 Class 10,000 and Class 100 Cleanrooms

Cleaning Capabilities

- Propellant systems (fuel and oxidizer)
- Hydraulic components and systems
- Purge panels
- Cryogenic components and systems
- Breathing air systems
- Hydrogen peroxide components and systems

Other Services

Highlights

- Nitric and citric acid passivation
- Nitric and hydrofluoric acid pickle
- Hydrofluoric acid etching
- Aluminum deoxidation

Primary Specifications

- NASA, AMS, SAE, ARP, ASTM, NAS
- Industrial cleaning
- Compressed gas association
- Aerospace / defense customers

Typical Products Serviced

- Piping and tubing
- Valves and related items
- Tanks and cylinders
- Heat exchangers
- Gauges and instruments
- Fittings and fasteners
- Transducers and sensors
- Fuel and oxidizer ducts
- Cryogenic and vacuum jacketed piping

ISO/IEC 17025



Contamination analysis and leakage tests are critical to aerospace programs.



Thermal cycling and aging tests at 125° C/ minute transition rates are conducted in controlled-environment chambers. Photogrammetry and low oxygen test capabilities are available.



Precleaning, cleaning and final packaging can be performed on both large and small specimens.



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