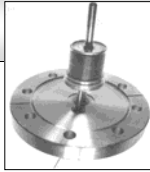




## NON-DESTRUCTIVE TESTING

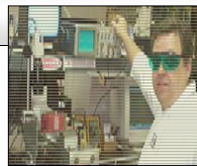
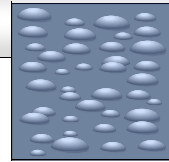


### He MASS SPEC LEAK TESTING (MS)

- Routine Production Procedure testing for Bellows Assemblies
- Required for Vacuum and Ultra-High Vacuum (UHV) Bellows

### POSITIVE PRESSURE TESTING (PPT)

- Air or He Gas under water testing (Bubble Testing)
- Pressures of 25,000 psi are achievable



### DYE / FLUORESCENT PENETRANT (LPT)

Inspection of the welds in Tubing and Bellows in accordance with ASME and Military Requirements.

### RADIOGRAPHY (X-RAY)

- As required for: Tubing, Bellows, Hose and Assemblies
- ASME Section III, Divisions I & 3

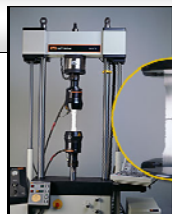


### ULTRA-SONIC INSPECTION (UT)

- Per ASME Section V, Article 4, 2003 ed, UT Testing of Welds
- Flaw Detection and Weld Inspection for Code Assurance

### MAGNETIC PARTICLE (MPI)

- Real-time Computer Multi-directional Inspection
- Dry Powder / Wet Visible



### CYCLE / FATIGUE TESTING

- Axial
- Lateral
- Rotational
- Vibrational



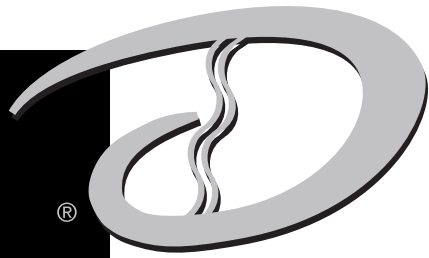
- External or Internal



### VISUAL INSPECTION (VT)

- Weld Inspection and Analysis - ASNT Level III
- VT Level II as per SNT - TC - 1A





## TESTING / CERTIFICATIONS

### METALLURGICAL

- Bend
- Hardness
- Impact
- Material Type
- Microstructure
- Tensile
- Yield

### WELD

- Process Compliance - Penetration and HAZ Analysis
- ASME Section 111 (Nuclear and NDT Certification)
- ASME Section VIII Procedural Conformance
- ANSI B31.1 and B31.3 Piping / Construction Conformance
- N Stamp and U Data Reports
- Section IX Welding

### PERFORMANCE

- Burst
- Cycle
- Hydro
- Shock Loading
- Spring Rate
- Torsion

### FATIGUE

- Ambient
- Elevated Temperature

### TECHNICAL STANDARDS

- ASME Section V, Article 4, 2003 ed. Ultrasonic Testing of Welds
- ASME Section I, Boilers
- ASME Section VIII, Pressure Vessels
- ASME B31.1, Power Piping
- ASME B31.3, Petrochemical Piping
- AWS D1.1
- AWS D1.1 Annex K for thin plates
- ASME Section V, VIII, B31.1 or B31.3

