

# Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

## JAMES WALDVOGEL Metallurgist/Materials Engineer

### PROFESSIONAL EXPERIENCE

2005 to **Robson Forensic, Inc.**

present *Associate*

Provide technical investigations, analysis, reports, and testimony towards the resolution of commercial and personal injury litigation involving Materials/Metallurgical Engineering consultation and support to the Insurance, Legal, Manufacturing, and Construction Industries. Expertise in metallic materials and joining processes, welding inspection, failure analysis, corrosion analysis, NDT (non-destructive testing), non-metallic materials and failures, including plastics, adhesives, ceramics, electronic components, etc.

1997 to **Waldvogel Metallurgical, Inc.,** West Hempstead, NY

present *President*

Founded WMI (metallurgical consulting corporation). Currently working as principal metallurgist for a wide variety of commercial and military programs and companies, including several divisions of Lockheed Martin and other defense contractors. Projects include development of materials and processing requirements for ion beam etching equipment, hearing aid components, deep submersible diving equipment, naval cooling equipment, chip capacitor metallization, etc. WMI founded in March 1997.

1980 to **Lockheed Martin Tactical Defense Systems,** Great Neck, NY

1997 *Materials Engineer, Materials Engineering Dept.*

Position included metallurgical laboratory leadership responsibility for metallurgical consultation for Lockheed Martin operations at Great Neck. Contracts and programs included MK-92 Weapons System, Trident Submarine Navigation Systems, NEXRAD, etc., which involved a wide variety of metallurgical processes and materials, ranging from "commercial" grade materials to high reliability soldering and welding processes. Responsibilities included metallic material selection, metallurgical failure analyses of structural members, electronic components, welds, solder joints, etc., radiographic inspection and operator certification, resistance welding schedule certification, fusion welding performance and procedure qualification for GTAW and GMAW processes, incoming inspection of raw materials, corrosion control processes and failure analyses, etc., using a wide variety of inspection and analysis equipment, including EDXRF, SEM, FT-IR, Metallographic, Radiographic, Hardness, Tensile testing equipment. Projects included development of solderability wetting balance testing and computerization, development of component lead rework techniques for restoration of solderability, upgrading of weld inspector training to conform to new military specifications, analysis of corrosion in Pacific Island NEXRAD installations, setting up a Czochralski and liquid phase epitaxial crystal growing facility for production of garnet mirrors for the Ring Laser Gyro program, development of

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cleaning techniques for precision optics, development of glass/metal sealing techniques for high vacuum systems and laser grade optics, and stress measurement and reduction techniques in laser optics.

- 1978 to 1980 **Howmet Turbine Components Corp.**, Roy Street, Dover, NJ 07801  
*Staff Metallurgist, Metallurgical Services Dept.*  
Position included direct supervision of eight testing and clerical technicians, responsibility for mechanical testing and chemical analysis of nickel and cobalt-base superalloys for investment-cast, high temperature turbine components, development of new alloy sources, melt procedures, casting parameters, and chemistry aims, in addition to general metallurgical problem solving on routine production runs.
- summer 1977 **Sperry Systems Management**, Great Neck, NY  
*Engineering Aide*  
Assigned to Simulations and Control Systems.
- 1975 to 1977 **Rensselaer Polytechnic Institute**, Troy, NY  
*Research Assistant, Dept. of Mechanical Engineering*  
Worked as a in fluidized bed energy and bearing research.

### PROFESSIONAL CREDENTIALS

AWS Certified Welding Inspector  
US Government Security Clearance: Secret

### EDUCATION

BS in Materials Engineering, Rensselaer Polytechnic Institute, Troy, NY 1978  
Specialization in Metallurgy includes all courses required for the Metallurgy option, Metallurgy electives, and related Materials courses. Received N.Y.S. Regents Scholarship and R.P.I. Scholarship upon graduation from Brooklyn Technical High School.

### PROFESSIONAL MEMBERSHIPS

American Society for Metals  
American Society for Testing and Materials  
American Welding Society  
National Association of Corrosion Engineers