

Michael R. Wackett

SUMMARY:

Responsible for the development of new products and manufacturing processes of various oxygen breathing regulators, gaseous air and oxygen systems, liquid oxygen systems and other related support equipment used in the military and medical markets. These include:

- Oxygen breathing regulators for military aircraft
- High altitude parachuting oxygen systems
- Liquid oxygen converter systems for medical evacuation support
- High pressure oxygen and nitrogen filling and distribution systems
- Conserving devices for home health care market

EXPERIENCE:

Vulcore Industrial LLC

2007 -
2010

Vice President Engineering

Responsible for the management of all product development activities. Responsible for development of engineering and manufacturing processes of Vulcore Industrial LLC technology.

Essex Cryogenics of Missouri, Inc., St. Louis, Missouri

2001 -
2007

Sr. Project Engineer

Responsible for the development of the following:

- Next-Generation Portable Therapeutic Liquid Oxygen (NPTLOX) System for Brooks AFB
- Deployable Oxygen Liquefier System (DOLS) for Brooks AFB.
- Components for the integration of an on-board oxygen generating system for the Korean Aerospace Industries XKT-1C aircraft.
- 7-liter Liquid Oxygen Converter for helicopter air ambulance integration
- Mass Casualty Incident Response Liquid Oxygen System and related patient accessories
- Backpack Medical Oxygen System for use by Special Forces pararescue personnel

Responsibilities have included supervision of other project engineers, designers and technicians in the development of the mentioned products. Development of the manufacturing and testing methods for the developed products.

Mallinckrodt, Inc., St. Charles, Missouri

1999 -
2000

Senior Design Engineer, Respiratory Group

Responsible for the development of pneumatic oxygen conserving regulators and metering devices for the home health care market. Responsibilities include development of specifications and test procedures, development of components utilizing injection molded plastics, and release of designs to manufacturing. Additional responsibilities included the generation of the technical files required for getting regulatory approval of the products for use in the U.S and the European Union.

Conax Florida Corporation, St. Petersburg, Florida

1995 -
1999

R&D Project Engineer, Life Support Systems

Responsible for the development of the Advanced Breathing Regulator (ABR) product line of oxygen breathing regulators used for parachutist and aircraft life support systems. Involved in the development of various valving and support equipment for parachutist oxygen systems. Responsible for the training of manufacturing personnel in the assembly and testing of oxygen breathing regulators. In-house consultant for molding of silicone rubber parts.

Litton, Instruments & Life Support Div., Davenport, Iowa

- July 1992 -
Jan. 1995
- Sr. Engineer, Life Support Group:
Responsible for product support on the CRU-68/A, CRU-73/A, CRU-93/A, and CRU-98/A panel-mounted oxygen regulators as well as various other regulators and associated valves for LOX systems. Project engineer responsible for design and development of test stand for OC-ALC at Tinker AFB for testing inlet valve subassemblies for the above mentioned panel-mounted oxygen regulators.
- Jan. 1986 -
July 1992
- Engineer, Life Support Group:
Project engineer responsible for the development of various oxygen breathing regulators for production and experimental development. Various projects include the following:
- Developed production version of CRU-98/A Molecular Sieve Oxygen Generating System (MSOGS) G-Compensated Diluter Demand Breathing Regulator for McDonnell Aircraft
 - Developed the CRU-93/A G-Compensated Diluter Demand Oxygen Regulator for General Dynamics/Fort Worth
 - Developed and marketed improved CRU-73/A to OC-ALC at Tinker AFB for kit upgrade
 - Developed On-board Oxygen Generating System breathing regulator for the Vought YA-7F aircraft
 - Developed experimental chemically hardened modified CRU-73/A regulator for Brooks AFB
 - Assisted in development of a BRAG valve (Breathing Regulator/Anti-G Valve) for General Dynamics
 - Assisted in development of g-compensated modified CRU-73/A regulator for Brooks AFB
- July 1984 -
Dec. 1985
- Engineer, PSA Technology Group:
Involved with development of experimental ground based oxygen/nitrogen-generating systems. Project engineer for development of a high-pressure delivery system and oxygen/nitrogen liquefaction system for the Expeditionary Oxygen/Nitrogen System (EONS) for the U.S. Marines.

Beech Aircraft Corporation, Wichita, Kansas

- Jan. 1982 -
June 1984
- Design Engineer:
Involved with the organization of cockpit instrumentation and the layout of the emergency oxygen system for the military C-12 version of the Beech Model B200 Super King Air for the Special Military Systems group. Involved with investigation, design, and coordination of modifications in the form of kit retrofit for the existing light piston-engine and heavy twin turboprop aircraft for the Modifications, Spares and Overhaul group.

EDUCATION:

University of Wisconsin - Platteville, Platteville, Wisconsin. Bachelor of Science degree in Mechanical Engineering, December 1981.

Graduate of Watertown Senior High School, Watertown, Wisconsin, June 1977.

Introduction to Pro/Engineer I & II, Version 20.0, RAND Worldwide, January 2000

ASTM Technical and Professional Training Course on Fire Hazards in Oxygen Systems, September 1999

SOCIETIES:

Member of American Society for Testing and Materials (ASTM), Technical Committee G04 on Compatibility and Sensitivity of Materials in Oxygen Enriched Atmospheres