Wilcoxon Research yesterday and today

History

Wilcoxon Research, Inc. has been a leading innovator and manufacturer of accelerometers and vibration sensing products for over 45 years. Wilcoxon was founded by a group of entrepreneurial scientists from the US Navy's David Taylor Research Center (now the Naval Surface Warfare Center). Their innovative nature, combined with their skill at designing and developing state-of-the-art piezoelectric accelerometers, resulted in highly specialized accelerometers and hydrophones for naval applications. These founding employees provided Wilcoxon with the technical base and innovative spirit on which the company stands today.

Over the last 45 years, Wilcoxon has expanded its technology base to commercialize over 200 state-of-the-art accelerometers, transducers, hydrophones, and sensors. As a result, Wilcoxon's market base has expanded from naval engineering and testing to encompass several other markets. Wilcoxon was the driving force to enable the wide-scale use of accelerometers for industrial Condition Based Maintenance applications and continues to lead that effort.

Today, Wilcoxon Research specializes in industrial predictive maintenance products including piezoelectric accelerometers, velocity sensors, 4-20mA sensors, vibration transmitters, vibration alarms, specialty sensors, hazardous area sensors, cables, connectors, enclosures, vibration shakers and more.

Engineering

Wilcoxon is a technology driven company backed by a strong engineering staff consisting of electronic, mechanical and instrumentation engineers. Many of these engineers have over 20 years experience in their area of expertise with the majority of the experience coming from their Wilcoxon employment. The company views its team of highly talented scientists and engineers to be Wilcoxon's greatest resource.

Wilcoxon is leading the charge in the development of next-generation sensing technology. In 1999, Wilcoxon Research established a "Wilcoxon Labs" R&D group to focus exclusively on the development of new technology for tomorrow's sensors and systems. Wilcoxon Labs is successfully developing the most advanced underwater and underground detection systems for US Defense and Homeland Security.

In addition to developing new technology, Wilcoxon Labs also designs specialty sensors to meet the needs of the progressive customer. In support of both government and industry requirements, specialized engineering of custom sensors is accompanied by technical consulting services to ensure the optimum performance environment for our sensors.

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Product applications

Vibration monitoring is useful in a variety of industrial, military and research applications. In addition to machine health monitoring, it also enables precise measurements for system design and evaluation. Wilcoxon products are used worldwide in the following applications:

Industrial

- balancing and alignment
- early detection of roller bearings, gear sets, and gearbox failure
- low-speed machinery monitoring
- fluid film bearing monitoring
- critical dimension case and structural monitoring
- pump, motor, fan, compressor performance/failure monitoring
- engine/propulsion shock and vibration monitoring

Military

- helicopter rotor track and balance; hanger bearing/fuselage; swashplate; propulsion, transmission, and gearbox monitoring
- shipboard condition based maintenance
- machinery condition analysis function
- submarine hull mounted accelerometers
- mechanical shock testing
- sonar soundwave level; change/conditioning monitoring; diagnostics of submarine silencing
- submersible structure stability testing
- towed-array monitoring

Research

- impact testing for vehicle testing research
- shock motion analysis and research
- vibration measurement of structures and objects in vehicle research
- environmental stress screening
- sonar/acoustic underwater evaluation and testing
- seismic evaluation and testing

Wilcoxon offers more than 200 vibration sensors to meet the needs of customers in the industrial and test and measurement markets for commercial and defense applications. The early detection of changes in the vibration signature of machinery can be critical to preventing damage to equipment and costly production delays. The quality and performance of Wilcoxon's sensors ensure that accurate and timely detection of the changing vibration signature will occur, thus enabling condition based maintenance of critical assets, instead of expensive and time-consuming repairs. Wilcoxon's modern manufacturing, assembly, and test facility is ISO-9001 certified to ensure a repeatable sensor design and manufacturing process. Manufacturing is documented and controlled under a proven Quality Assurance System and guarantees that Wilcoxon products will have extremely low failure rates and long-term consistent performance. Wilcoxon's standard industrial sensors are so robust that it is not unusual for them to remain in service for 25 years or more.