

AMERICAN CRANE & EQUIPMENT CORPORATION MERGES TECHNOLOGY WITH OVERHEAD LIFTING, TO ALIGN WITH THE FUTURE OF MANUFACTURING

By Quinton Chambers

Arriving at the great milestone of our 50th anniversary, American Crane and Equipment Corporation has continued to solidify itself as the overhead lifting company, most respected for its products and people. For 50 years we have supported industries crucial to the advancement and safety of our nation, including critical manufacturing, the nuclear industry, the US military, and aerospace. Along the way we have gained more knowledge and refined our process. Recently, we have unveiled our



innovation lab, where we are actively integrating the technology of the future with our overhead lifting capabilities; our first step forward came when we discovered how to leverage the Internet of Things (IoT) with our new Smart Crane System.

What is the IoT? In simple terms, it's an extension of internet and network connections to different sensors and devices embedded within industrial equipment and machinery. And its use is on the rise. According to the most recent MHI Annual Industry Report, IoT solutions are currently deployed by 21% of material handling equipment owners and are poised to be adopted by 80% of them within the next five years. Further, the report found that 45% of those surveyed believe IoT has the potential to disrupt the industry in a positive way or create a competitive advantage among those who use it; 39% say IoT supports ongoing operational improvements.



To support and utilize those findings, our ACECO Smart Crane System is designed and engineered to support real-time, wireless IoT communication with overhead handling equipment. This enhanced data exchange allows overhead handling equipment owners and operators to gain access to a variety of information about their systems, and to benefit from:

- Detailed remote monitoring information about travel, lift, and speeds; load weights; limit states; amperage ranges; and drive fault status.
- Collection and analysis of long-term, historic usage data for comparison and evaluation of trends in the Cloud.
- Detection of, and alerts about, unsafe conditions.
- Alerts to key personnel with event-based notifications via email or text when a pre-determined threshold has been reached.
- More accurate timing for scheduling predictive and preventive maintenance or repairs based on actual usage.

Customizable and scalable, the ACECO Smart Crane System can be provided with a new crane system or retrofitted into existing equipment. Its

system architecture interfaces with any crane system equipped with variable frequency drives (VFDs) for motor control and can be integrated with nearly any sensor embedded within the overhead equipment system.

Data collected by American Crane's IoT Smart Crane System can be accessed in a centralized dashboard by both local and remote users via web browser or app. The Cloud-based dashboard offers graphical chart and table views of a broad range of data points. These include determination of Crane Manufacturer's Association of America (CMAA) usage-based service classification (Class A-F); monitoring and more accurate predictions of component life spans based on speed, run time, and loading; precise scheduling of preventive maintenance and repair based on actual usage; trends in operation and function; and access to crane-specific design documentation, inspection reports, and user manuals.

Additionally, application of the ACECO IoT offerings is not limited to overhead lifting. Our MHIoT (Machine Health IoT) device can also be utilized to monitor the operation and health of other pieces of critical industrial equipment. The MHIoT device monitors and trends current,

temperature and vibration levels, which allows users to gain real time and historical data on the performance of other machinery within their facilities via a convenient remote user interface. This data can be used to identify and create actionable insights pertaining to the health of the machinery, with the goal of decreasing or eliminating potential down time via the proactive planning & implementation of maintenance and repair activities.

Our cleanroom hoists and cranes are engineered to lift and lower materials and goods safely and efficiently without introducing contaminants into the space. We manufacture them in various designs and configurations to suit different situations, such as satellite and semiconductor manufacturing operations. Our standard clean room hoist and crane offerings are available with load capacities to suit the application. Additionally, we can design, engineer, and fabricate custom material handling or overhead lifting solutions to meet highly specific or unique customer requirements. We also offer inspection, testing, repair, rebuilding, and upgrading services.

As we make strides towards a prosperous and innovative future, we are proud to announce that we have been certified as both a Women's Business Enterprise (WBE) and as a Small Business Administration's Women-Owned Small Business (WOSB) by the Women's Business Enterprise National Council (WBENC).

According to the U.S. Census Bureau, the number of women-owned businesses has been steadily on the rise, with the most recent figures from 2020 finding that 20.9% (1.2 million) of American companies were owned by women.

Too often, women are not aware of the opportunities available in manufacturing. There is, however, a significant overlap between what women want in careers and the attributes of careers in manufacturing today. To those wanting to enter our field, join us! There is exciting work to be done and a path that still needs paving for the future generations of women.

Being a certified WBE/WOSB enables our customers in government entities and private industry to formally acknowledge their partnership with American Crane, not only as a leading supplier of innovative overhead handling solutions but also as an indicator of their increased commitment to engaging a diverse supplier base. By partnering with a forward-thinking, evolving organization that has valued and prioritized inclusion, diversity, and innovation within our operations for 50 years, our customers—both existing and new—will continue to benefit from our creative solutions.

For additional information, please visit www.americancrane.com.

