Curriculum Vitae

Brad Lytle PE

Senior Mechanical Engineer

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EDUCATION

University of Florida – Bachelor of Science, Mechanical Engineering 1980

REGISTRATION

Professional Engineer – 1985
State of Florida #PE36121

PROFESSIONAL SOCIETIES

ASME Codes and Standard Committee on Cranes for Nuclear Facilities (1986 – Present). Committee is responsible for development / updating four standards including ASME NOG-1, "Nuclear Overhead and Gantry Crane Standard" (first published in 1983) and ASME NUM-1, "Nuclear Underhung and Monorail Crane Standard" (first published in 1997). These documents establish industry design standards for safety-critical nuclear material handling cranes (these cranes can also be used for handling space flight hardware). Committee Chairman (2001-2007); Subcommittee Chairman (3 years); Subcommittee Secretary. Contributing author to all standards.

PUBLICATIONS

8th International Conference on Nuclear Engineering (ICONE-8), Baltimore, Maryland (April 2000) - Presented paper titled "Cranes at NASA's Kennedy Space Center Utilizing Enhanced Mechanical and Electrical Safety Features." This paper covered mechanical and electrical features of KSC's enhanced-safety cranes.

Brad joined the Eureka's Engineering Team in June 2022. He comes to us with 42 years of experience in crane design and operations at NASA's Kennedy Space Center (KSC). This includes 36 years with NASA and 6 years with RS&H Architects Engineers and Consultants.

NASA 1980-2016 Senior design engineer responsible for in-house design and technical management of contracted design tasks related to overhead cranes and other ground support facilities. His experience base includes 18 years in facility design and 17 years with operations within the KSC's Design Engineering Organization.

He procured overhead cranes for the Space Shuttle Program, Expendable Launch Vehicle Payloads (satellites), International Space Station components and Institutional areas of KSC and Cape Canaveral Space Force Station (CCSFS).

He was a contributing author to the design portions of the NASA Safety Standard for Lifting Devices and Equipment (NASA-STD-8719.9). This NASA wide safety document encompasses the minimum design, inspection and maintenance requirements for cranes and hoists and other material handling items.

Brad was instrumental in developing overhead crane design requirements that included special enhanced-safety mechanical and electrical control systems for the crane to meet NASA Safety requirements. He led mechanical, electrical control and testing on all crane projects.

He was instrumental in developing enhanced-safety electrical control systems which incorporate commercial crane motor controls that's suitable for safety-critical material handling of spacecraft and launch vehicles. Spacecraft and launch vehicles may be loaded with toxic chemicals, high pressure gas and high explosives when lifting. Safety-critical controls are provided for the protection of extremely fragile loads and life-safety of people within the vicinity of the lifting operations.

RS&H, 2016-2021 Brad perform system design, engineering studies, on-site construction administration and project management. Work for commercial aerospace clients, including material handling studies, equipment selection, Failure Mode and Effects Analysis (FMEA) related to various safety critical, aerospace ground support equipment and cranes.

Representative project experience:

Served as lead design engineer, project planning and project coordinator for 16 major crane projects (that included 24 total cranes) at CCSFS and KSC — This includes Vehicle Assembly Building (VAB), 325-Ton Cranes that is used for assembly of the Space Shuttle and its solid rocket boosters (the boosters are loaded with propellants during handling); Space Station Payload Facility (SSPF), two 30-Ton Cranes used for final processing and handling Space Station components before flight; VAB, 175-Ton Crane Controls Replacement. Design and engineering support; LC-39B Side Flame Deflector Rails; Engine Service Platform Rail Refurbishment Study. Extensive experience with Reliability Engineering, particularly the application of FMEA to mechanical and electrical crane systems.