D. Larry Dunville
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Overhead Crane Consulting, LLC

Curriculum Vitae

August 20, 2024

PERSONAL INFORMATION:

- Born October 8, 1952, Highland Park, Michigan
- Married, June 28, 1975

EDUCATION:

- **University of Notre Dame**, Notre Dame, IN, BA Finance 1975
- **Harvard Graduate School of Business**, Cambridge, MA, OPM13 1988

CAREER HISTORY:

- **Member of ASME/ANSI B30.2 Overhead and Gantry Cranes Committee,** (2018 to present)
  A member of the ASME (American Society of Mechanical Engineers) committee that writes the American National Standards for the crane industry. These are the standards that are used by the US and used by much of the world.

- **Member of ASME/ANSI B30.16 Electric Overhead Hoists** (2019 to present)
  A member of the ASME (American Society of Mechanical Engineers) committee that writes the American National Standards by the hoisting industry.

- **Member of ASME/ANSI B30.17 Under Running and Single Girder Cranes** (2022 to present)
  A non-voting member of the ASME (American Society of Mechanical Engineers) committee that writes the American National Standards for the crane industry. These are the standards that are used by the US and used by much of the world.

- **Member of AIST TR-13 Metal Building with Overhead Cranes** (2021 to present)

- **Overhead Crane Consulting**, LLC, Owner/President, 2016 to present
  Overhead crane consulting specializing in consulting engineering for EOT cranes, specification writing and review, corporate safety programs, and forensic expert witness for legal support of litigation involving cranes.

- **Executive Director, CCAA** (Crane Certification Association of America), 2016 - 2018
  Executive Director of a non-profit association of crane inspection professionals. The organization was founded in 1984 and consisted of Mobile, Maritime, Tower, and Overhead Cranes' professional inspectors. The organization promotes crane safety through inspection training, testing, and certification of independent crane inspectors.

- **Digital Industrial Marketing, LLC**, Sawyer, MI, Owner/President, 2014 to 2016
  Online marketing for industrial companies selling big-ticket, capital goods (work performed during interim of Dearborn sale non-compete provision)

- **Dearborn Crane & Engineering Co.**, Mishawaka, IN, Owner/President 1975 to 2013
  - Founded as Dearborn Fabricating and Engineering Co. in 1947 in Dearborn, Michigan
  - Design, fabrication, installation of overhead cranes, personal responsibilities including;
    - apprenticed in the shop before college graduation
    - learning welding and crane fabrication
    - learning crane and runway installation and alignment
    - engineering, crane design, and estimating

- **Xcel Computer Systems**, Mishawaka, IN, Co-Owner/President, 1985 to 1989
  CAD/CAM micro-computer systems integrator.

WORK ACCOMPLISHMENTS:

- **Open Book Management**
  I created an open-book management system whereby the company held a plant-wide meeting with all employees, combining shop and office, to review the past month's financial statements. At the close of the meeting, all employees were issued a profit-sharing check based on a formula directly from the P&L statement.

- **ISO9001 Certification**
  Dearborn Crane was one of the first US crane builders to attain ISO9001 certification. The speed and comparatively low cost of achieving certification resulted from the Open Book Management system and the spirit of inclusion that it inspired.

- **Changed Strategic Direction**
  As a result of my studies at Harvard Business School, I determined that Dearborn had to become a more focused company. In the early 1990s, Dearborn switched from a general job shop fabricator specializing in cranes to a singularly focused crane builder. This resulted in a name change from Dearborn Fabricating and Engineering Co. to Dearborn Crane and Engineering Co. About five years later, we further specialized in heavy capacity and/or long-span box girder cranes, which resulted in developing a cambered box girder table with a powered hydraulic press and automatic submerged arc welding line.

- **Purdue's Technical Assistance Program**
  Dearborn worked with Purdue's Technical Assistance Program to design a more economical plate steel box girder to fabricate overhead cranes. The project yielded some process improvements but did not produce the revolutionary redesign I had hoped for.

- **Developed a (winter compliant) water-based painting system**
  Worked with the local PPG Paints to develop a water-based painting system that would reduce VOC's released into the atmosphere while not increasing paint dry time and, at the same time, eliminating the need for an explosion-proof painting facility. All this while still workable in sub-60-degree winter shop temperatures and high humidity summer days.

- **Submerged Arc Welding**
  I have worked with Lincoln Welding Company to automate the welding process for submerged arc welding of longitudinal box girder beam seams, cutting welding time by two-thirds.

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FIVE PROJECTS OF NOTE:

- **Freeport McMoRan, Morenci Copper Mine, Morenci Arizona**
  I was hired by FMI/Morenci, North America's largest copper mine, to transition their Tank House copper processing from steel wire rope hoists to Ultra High Molecular Weight Polyethylene (UHMWPE) fiber rope electric hoists. The Tank House process involves sulfuric acid and high voltage (25,000 volts) to process copper. The acid was detrimental to the steel wire rope, and the high voltage could result in "stray current" electrocution to operators. Size for size, the Ultra High Molecular Weight Polyethylene (UHMWPE) rope is 15% stronger than steel wire rope; it is impervious to sulfuric acid and is a non-conductor, thereby eliminating the risk of stray currents.

- **Verson Press, Chicago, Illinois**
  Verson Press of Chicago was the last of the big press builders in the US. I sold and was the project manager for installing two 500 Ton Double Girder overhead bridge cranes. Verson Press was located within a mile of Lake Michigan, and the crane wheel loadings were such that the building contractor had to engineer special footings to withstand the potential loading due to the lakefront soil conditions. However, even with the special footings, the specially engineered footings could not handle the load of two cranes, lifting a full capacity load simultaneously. Therefore, we had to design a crane control lock-out system such that only one crane would be allowed to operate at capacity at a time within a certain proximity of each other.

- **SpaceX, California, and Florida**
  The SpaceX project was one of my favorite projects. SpaceX was using NASA facilities and was subject to NASA crane specifications. The NASA specs appeared to be a patchwork of Nuclear Crane Specs, AISE Steel Mill Specs, and Military Crane Specs, making for the most outrageously expensive crane imaginable. After talking to the SpaceX procurement officer, it was determined that SpaceX could not afford the typical NASA cranes, nor was it necessary for their application. Dearborn proposed to write a new custom spec and started with a clean sheet of paper. Upon completing the spec writing process, the Dearborn specs were approved, and we received orders for both California and Florida facilities. The Dearborn specs are now the official SpaceX Crane Specification.

- **Electric Boat/General Dynamics/US Navy/AECOM**
  Engaged by AECOM (the world's largest General Contractor) to oversee the overhead Crane portion of their contract with Electric Boat and the US Navy to build a new manufacturing facility for the building of the next generation Columbia Class submarine at Groton, Connecticut. The cranes included three cranes over the 125-foot span, 100 feet of lift, and a 140-ton capacity. Two cranes were CMAA Class "D" cranes, and one was a NOG-1 Nuclear Crane. Each of these cranes had a gross weight of over one million pounds.

- **Alyeska Pipeline (Alaskan Pipeline) Operator Safety Training**
  Dearborn Crane was engaged in providing overhead crane operator training for the maintenance crews of the Alyeska Pipeline. Because of their unique issues with sub 30 degrees below zero temperatures, I wrote a custom safety and crane maintenance program tailored to their needs.

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PATENTS:

- **US Patent #4346799**
  Co-designer of US Patent #4346799 and the design of an automatic AS/RS storage and retrieval system integrated into an overhead handling system.

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PUBLISHED WRITINGS:

- **Programmable Logic Controllers,** Power Transmission Engineering Magazine
  I wrote this article in the late '70s or early '80s about using PLC's (programmable logic controllers to control cranes and conveyors). The beauty of using PLC's is that the logic could be "changed on the fly" on a computer screen rather than "hard-wired." This provided lower programming costs and wiring and process debug costs. (Please note, I have moved from my home of 30+ years and no longer have a copy of the article to quote the publication date accurately, and Power Transmission Engineering's website archive does not go back to the 1980s.)

- **Avoiding the Pitfalls of Crane Installation in a New Building,** The Fabricator, Feb 2001
  This article showed the pitfalls of using the various industry specifications independent of each other rather than the whole.

- **Six Dangerous Misconceptions About Crane Safety,** The Fabricator, July 2003
  Overhead cranes are not complicated devices to operate, but for some reason, they are fraught with misconceptions by owners and operators alike. I wrote this article to dispel these misconceptions.

- **AISE/AIST Spec 6 Specification for Electric Overhead Traveling Cranes for Steel Mill Service**
  (Association of Iron and Steel Engineers, now AIST, Association for Iron and Steel Technology) this committee writes the overhead cranes specifications for the US steel industry. I had a three-year term (approx. 1999 to 2002) on this committee, during which I helped write, review, and did the final sign-off on the then-new version of the specifications.

- **AISE/AIST Spec 13 Design and Construction of Mill Buildings with Cranes**
  (Association of Iron and Steel Engineers, now AIST, Association for Iron and Steel Technology) (approx. 1999 to 2002). This committee writes the specs for metal buildings in which overhead cranes are installed. I had a three-year term on this committee, during which I helped write, review, and final sign-off on the then-new version of the specifications. My appointment was the first time a single person was included on the No. 6 and No. 13 committees, which seemed like a common-sense approach.

- **EOT Crane Inspection Pitfalls,** Industrial Lifting Exchange, Summer 2018
  The overlaps and gaps in the EOT crane inspection specifications set down by OSHA 1910.179, ASME/ANSI B30.2, and CMAA 70 must be negotiated very carefully by both crane inspectors and crane owners.

AWARDS/CERTIFICATIONS:

Personal Awards

- **Concepts of the '80s**
  The Concept of the 80's Award was an engineering competition sponsored by Material Handling and Engineering Magazine. The award was for a part of a project done for the Chrysler Corporation, Kokomo Transmission Plant. It involved an automatic storage and retrieval system for which I later received a patent.

Certifications:

- **CMAA Overhead Lifting Safety Conference 2020**
  Conducted by Crane Manufacturer's Assoc. of America, 9/25/2020

- **Certified Electric Overhead Traveling Crane Inspector**
  The test administered by the North American Crane Bureau on 9/22/2017 expires on 9/30/2020

- **OSHA Lockout/Tagout** (course #7115)
  Arizona State University OSHA Training Institute Education Center, 2/25-26, 2019

- **OSHA Standards for General Industry** (Course #511)
  Arizona State University OSHA Training Institute Education Center, 4/15-18, 2019

- **OSHA Fall Protection (**Course #3115)
  Arizona State University OSHA Training Institute Education Center, 5/14-16, 2019

Company Awards:

- **Quest for Excellence Award**
  Indiana Governor's Excellence Award

- **Business Growth 100 Award**,
  Indiana University's Kelly School of Business Growth Award, twice consecutively

- **FMA's Manufacturing Safety Award**
  Fabricated Metal Association Award for Safety, multiple occasions

ASSOCIATIONS AND BOARDS: (past and present memberships)

- **Harvard Business Review Advisory Council Board** (2024 to present)
- **ASME/ANSI B30.2 Overhead & Gantry Cranes member** (2018 to present)

- **ASME/ANSI B30.16 Overhead Hoists- Underhung** (2019 to present)

- **ASME/ANSI B30.17 Underhung and Single Girder Cranes** (non-voting member) (2022 to present)

- **CCAA EOT Crane Inspector Certification Committee** (2018 to present)
  Member of the four-person committee creating the EOT/Overhead Crane inspector's certification test for the CCAA.

- **Executive Director, CCAA** (Crane Certification Association of America), (2016 to 2018)

- **CCAA Member,** (Crane Certification Association of America), (2016 to present)

- **AIST Member** (American Institute of Steel Technology) (2018 to present)

- **AIST TR-13 Mill Buildings with Overhead Cranes Committee Member** (2021 to present)

- **ASSP Member** (American Society of Safety Professionals) (2019 to present)

- **FEWA** (Forensic Expert Witness Association), (2016 to present)
  I am currently pursuing the CFLC (Certified Forensic Litigation Consultant) certification.

- **FEWA Arizona Chapter, Board Member** (Forensic Expert Witness Association), (2017 to present)
- **Purdue Technical Assistance Program**-Purdue University, Industrial Advisory Council Board Member
- **Fabricators and Manufacturers Association** (FMA), past member (late 1990's)
- **Fabricators and Manufacturers Association** (FMA), past board member (late 1990's)
- **Fabricators and Manufacturers Association** (FMA), past executive board member (late 1990's)
- **Board of Directors, Advanced Material Processing**, Wayne, MI (the mid-1990s)
  A high-tech shot peening company that specialized in peening metal hardening.

TEACHING/SPEAKING:

- **2022 API Offshore Safe Lifting Conference & Expo** (American Petroleum Institute)**.**
  "Inspection and Failure Analysis Through Remote Photography."
- **AIST Crane Symposium (**American Institute of Steel Technology), (On-line Webinar) October 2020,
  "Standard AISC Building Steel Tolerances are not Good Enough for Crane Runways."
- **Forensic Expert Witness Association** (Arizona Chapter) October 2019
  Going Paperless with Your Whole Business
- **AIST Crane Symposium** (American Institute of Steel Technology), Louisville, KY, June 2019
  How/Why to Design Your Own EOT Crane Inspection Program, highlighting OSHA 1910.179j, B30.2, CMAA 70 and 78
- **Hi-Speed Industrial Service Crane Symposium**, Memphis, TN, August 11/12/2018
  Crane safety inspection requirements, highlighting OSHA 1910.179(j), B30.2, CMAA 70 and 78
- **AIST Crane Symposium** (American Institute of Steel Technology), Pittsburgh, June 2018
  Presentation regarding crane safety inspection requirements, highlighting OSHA 1910.179(j), B30.2, CMAA 70 and 78
- **ASME/ANSI B30.2** (American Society of Mechanical Engineers/American National Standards Institute), Nashville, May 2018
  Presentation regarding crane safety inspection requirements, highlighting OSHA 1910.179(j), B30.2, CMAA 70, and 78.
- **Forensic Expert Witness Association Annual Conference**, San Francisco, April 2018
  Presentation on effective communications and marketing in the digital age.
- **Forensic Expert Witness Association (Arizona Chapter), March 2018**
  Presentation on effective communications and marketing in the digital age.

- **Modex/CMAA Crane Safety Inspection Presentation**, Atlanta, April 2018
  Presentation at the Modex/CMAA (Crane Manufacturers Assoc. of America) Crane Safety Conference regarding the lack of specificity in the crane inspection standards and how to comply with the confusing patchwork of specifications.

- **CCAA (Crane Certification Association of America) Annual Crane Conference**, Tulsa
  February 2018 Presentation about Crane inspection standards.

- **Forensic Expert Witness Annual Conference**
  In the Spring of 2017, in San Francisco, CA.

- **A/E/C (Architects, Engineers, and Contractors) Overhead Crane Training Program**
  I developed a course to train architects, engineers, and contractors on the unique requirements for buildings with overhead cranes. I gave this course at least once a quarter for the last decade. Although I never made a sales pitch, the course's purpose was to elevate my company as the "go-to" source for overhead cranes by our expertise.

- **Indiana OSHA Safety Training**
  On several occasions, I was asked to teach parts of the standard OSHA 10 Hour and OSHA 30 Hour training program in Elkhart, IN.

- **Society of Manufacturing Engineers (SME)**
  I spoke on crane maintenance and runway design at the University of Michigan, Ann Arbor, Las Vegas, NV, and Orlando, FL.

- **AIST World Class Crane Management Seminar** (formerly AISE)
  Spoke on crane maintenance and runway design in Cleveland, Ohio, and Pittsburgh, Pennsylvania. The presentation taught the interrelationship of crane performance and inadequate crane runway alignment.

- **Fabricators & Manufacturers Association** (FMA)
  Spoke on Open Book Management and Crane Safety at Las Vegas, NV, Fabtech/Chicago, and Fabtech/Cleveland.

CONTINUING EDUCATION:

- CMAA Overhead Lifting Safety Conference 2020
- AIST Crane Symposium, Louisville, KY, 2019
- Hi-Speed Industrial Service Crane Symposium, Memphis, TN, August 11/12/2018
- 25th AIST Crane Symposium, Pittsburgh, PA, 2018
- Forensic Expert Witness Association Annual Conference, San Francisco, CA- 2018
- Expert Witness Training by Seak Expert Witness Training Co. San Diego, CA- 2018
- NACB (North American Crane Bureau) EOT/Overhead Crane Inspector Training and Certification, September 2017, EOT Crane Inspector Certification valid 9/22/2017 – 9/30/2020
- Forensic Expert Witness Association Annual Conference, San Francisco, CA- 2017
- Magnetek Radio Control School for Overhead Cranes, Magnetek Corp, Milwaukee, Wi, 2017
- Advanced Testifying Skills for Experts by Seak Expert Witness Training Co., January 2017
- Magnetek VFD Motor Control Training for Overhead Cranes, Magnetek Corp, Milwaukee Wi, August 2017
- Forensic Expert Witness Association Annual Conference, San Francisco, CA- 2016

- World Class Crane Management Seminar IV, 1999
- World Class Crane Management Seminar III, 1998

The following is a partial list of continuing education I've attended previous;

- Cleveland Tramrail Product School at Wickliffe, OH
- P&H/Harnischfeger Crane Maintenance School at Milwaukee, WI
- Dodge Power Transmission School, South Bend, IN
- Budget/Shaw-Box Hoist School, Muskegon, MI
- JB Webb/Unibilt Overhead Conveyor School, Farmington Hills, MI
- R&M Hoist School at Springfield, OH
- Kone Crane Training, Springfield, OH, and Hyvinkaa, Finland
- GH Crane Product Training, Salbatore, Spain
- Marketing for B2B Manufacturing Companies, University of Michigan, Ann Arbor, MI
- B2B Marketing for Industrial Companies, Harvard Business School, Professor Ben Shapiro
- Fundamentals of Sales Management, American Management Association, Chicago

IN-HOUSE PRODUCT TRAINING:

We had a monthly "Lunch and Learn" program in which we would bring vendors into Dearborn Crane to perform in-house training for the whole engineering and sales staff, rather than sending just one or two to the manufacturer's schools. Although called "Lunch and Learn," these training sessions would be anywhere from an hour to two days in length. This is just a small sampling of the schools held at Dearborn offices.

- Harrington Hoist, In-house Training
- Gorbel Crane, Workstation Training
- Gorbel Jib Crane Training
- Gorbel "CraneBrain" Computer Estimating Training
- Hytrol Conveyor, In-house Training
- Kone Pre-engineered Crane Training
- R&M Markman Computer Estimating Training
- American Sling Chain (ASC) Industries
- Gantrex Rail Clips Training
- Molyneux Rail Clips Training
- Drive-Con, Inc. Training
- Electromotive Variable Frequency Drive Training

CONTACT INFORMATION

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