D. Larry Dunville

President/Owner, Overhead Crane Consulting, LLC

CURRICULUM VITAE

March 8, 2016

PERSONAL INFORMATION

- Born October 8, 1952, Royal Oak, Michigan
- Married, June 28, 1975

EDUCATION

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

CAREER HISTORY

- **Dearborn Crane & Engineering Co.**, Mishawaka, IN, Owner/President 1975 to 2012
    - Founded in 1947 in Dearborn Michigan by my father and two uncles
    - Founded as Dearborn Fabricating and Engineering Co.
    - Design, fabricate, installation of overhead cranes, personal responsibilities including;
        - apprenticed in shop before college graduation,
            - learning welding and crane fabrication
            - learning crane and runway installation
        - sales & sales management
        - engineering, crane design and estimating
        - marketing/strategic planning
        - management
- **Xcel Computer Systems**, Mishawaka, IN, Owner/President, 1985 to 1989 (approx)
    - CAD/CAM micro-computer systems integrator
- **Digital Industrial Marketing, LLC**, Sawyer, MI, Owner/President, 2014 to present
    - On-line marketing for industrial companies
- **Overhead Crane Consulting**, LLC, Owner/President, 2016 to present
    - overhead crane consulting specializing in specification writing and review, safety programs and forensic expert witness for legal cases involving overhead cranes

WORK ACCOMPLISHMENTS

- **Open Book Management**
  I established an open book management system whereby each month we held a plant wide meeting with all employees, combining shop and office, to review the past months 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 low cost of our attaining certification was directly a result of our Open Book Management system and the spirit of inclusion that it inspired.

- **Changed Strategic Direction of Dearborn**
  As a result of my studies at Harvard Business School, I determined that we had to become a more focused company. Around the early 1990's, we made a switch from a general job shop fabricator that specialized in cranes, to be 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 into heavy capacity and/or long span box girder cranes which resulted in us developing a cambered box girder table with a powered hydraulic press and automatic submerged arc welding line.
- **Purdue's Technical Assistance Program**
  We worked with Purdue's Technical Assistance Program to design an easier to build plate steel box girder to be used in the fabrication of overhead cranes. The project yielded some process improvements, but did not produce the new and revolutionary redesign that I had hoped.
- **Developed a (winter compliant) water based painting system for steel**
  We worked with the local PPG Paints to develop a water based painting system that would drastically reduce VOC's released to the atmosphere while not increasing paint dry time and preclude the need for explosion proof painting facilities. All this while still working in sub 60 degree winter shop temperatures and high humidity summer days.
- **Submerged Arc Welding**
  Worked with Lincoln Welding Company to optimize and automate the welding process for submerged arc welding of longitudinal box girder beam seams.

FIVE PROJECTS OF NOTE

- **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 the installation of 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 because of the lake front soil conditions. Even with the special footings, they could not handle the load of two cranes lifting a full capacity load, side by side. We therefore 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. Further, the crane girders were of such size and weight, that we had to scour the country to find a mobile crane that could handle the weights and horizontal reach to install our cranes. The day of transporting the girders, we had to enlist the aid of then Senator Paul Simon to "lean" on the Federal and State Departments of Transportation to allow us to get the enormous steel crane girders over Federal, State and Local roads into the city of Chicago, in spite of having had oversize trucking permits for over a month.
- **SpaceX, California and Florida**
  The SpaceX project was one of my favorites in that because SpaceX was using NASA facilities, they were subject to using NASA crane specifications. The NASA specs appeared to be a patchwork of Nuclear Crane Specs, AISE Steel Mill Specs and Military Crane Specs to make 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 is necessary for their application. Dearborn proposed to write a new custom spec and start with a clean sheet of paper. Through the spec writing process, we justified every sentence of the old spec we deleted and did the same with every new sentence we added. Upon completion of the spec writing process, our specs were approved and we received orders for both California and Florida facilities and established what is now the SpaceX Crane Specification.
- **Fort Bragg Army Base, North Carolina**
  Shortly before the 9/11 disaster, Dearborn Crane received an order for several 30 ton cranes and 5 ton monorails for Ft Bragg, NC Army Base. The cranes were for the loading military equipment of the 82nd Airborne Rapid Deployment Forces. As with any government project the approval process was slow and arduous, that is until the 9/11 terrorist attack. The week following, I was called by the Army Corp of Engineers and asked how fast the project could be completed. I gave him the original 20 week delivery quoted and he said they had to be done in a month. I told him my supplier couldn't get the materials in

twelve weeks much less having completed the cranes in a month. He then told me he had the military authority to stop all production of everything for me and everyone of my suppliers and we had to work on his project only. After checking with my lawyer, he did in fact have the authority of the Federal Government to virtually shut us down for everything other then his project! He asked for the names and phone number of all my suppliers. The following day we received commitments from all the sub contractor's and suppliers. The project was delivered within the month, as demanded. See the following YouTube video carried by a local NBC new affiliate, https://www.youtube.com/watch?v=gETJcaMaXws.

- **Alyeska Pipeline (Alaskan Pipeline) Operator Safety Training**
  Dearborn Crane was engaged to provide overhead crane operator training for the maintenance crews of the Alyeska Pipeline. Because of their unique issues with sub 30 degree below zero temperatures, I wrote a custom safety and crane maintenance program for their very unique needs.
- **AM General, Mishawaka, Indiana**
  In the early 1980's the US Army sent out for bids a contract to develop the next generation Jeep. The AM General Corporation of Mishawaka, Indiana won the bid with the HMMWV/Humvee or "Hummer" as we call it at the AM General plant. Dearborn was engaged to supply the material handling system for the production of the Humvee including the Power-and-Free overhead conveyor, turning fixtures, monorails, jib crane, chain hoists and overhead cranes.

PUBLISHED WRITINGS

- **Programmable Logic Controllers, Power Transmission Engineering Magazine**
  This was an article I wrote in the late 70's or early 80's about using using PLC's (programmable logic controllers to control cranes and conveyors). PLC's were precursors to the early desktop computers and implemented electrical ladder logic control. 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 as well as lower wiring and process debug costs. (Please note, I have recently moved from my home of 30+ years in Indiana to Tucson and no longer have a copy of the article to accurately quote the publication date and Power Transmission Engineering's website archive does not go back to the 1980's.)
- **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 as a whole.
- **Six Dangerous Misconceptions About Crane Safety, The Fabricator, July 2003**
  Overhead cranes are not difficult devices to operate, but for some reason are fraught with misconceptions by owner and operators alike. I wrote this article to dispel these misconceptions.
- **AISE 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 specs for overhead cranes for the US steel industry. I had a three-year term on this committee during which I helped write, review and did final sign-off on the then new version of the specifications.
- **AISE Spec 13 Design and Construction of Mill Buildings with Cranes**
  (Association of Iron and Steel Engineers)(now AIST, Association for Iron and Steel Technology) 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 did final sign-off on the then new version of the specifications.
- **Designer of #1 Ranked Overhead Crane Website**
  I was one of the first overhead crane websites with hundreds of pages of crane contents and ranked #1 on a Google search of the term "Overhead Crane" from 2000 to the time of my selling the company in 2012. I was the author of virtually all the website content.

AWARDS

- **Concepts of the 80's**
  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 we did for the Kokomo Chrysler Plant. It involved an automatic storage and retrieval system for which I later received a patent.
- **Indiana Governor's Quest for Excellence Award**
- **Indiana University's Kelly School of Business Growth 100 Award**, twice consecutively
- **FMA's Manufacturing Safety Award**

PATENTS

- **US Patent #4346799**
  Co-designer of patent US Patent #4346799 along with Bill Seaton and Chuck Good for the design of an automatic AS/RS storage and retrieval system integrated into an overhead conveyor system.

ASSOCIATIONS AND BOARDS (past memberships)

- **Purdue Technical Assistance Program**, Purdue University, Industrial Advisory Council Member
  I was a member of the board for a three year term. The program was to provide technical assistance to Indiana manufacturing companies through the resources of the Purdue School of Engineering.
- **Society of Manufacturing Engineers** (SME), member
- **Fabricators and Manufacturers Association** (FMA), member
- **Fabricators and Manufacturers Association** (FMA), board member
- **Fabricators and Manufacturers Association** (FMA), executive board member
- **Board of Directors, Advanced Material Processing**, Wayne, MI
  A high tech shot peening company that specialized peening metal hardening of gears, connecting rods and aircraft landing gear and aircraft wing surfaces.

TEACHING/SPEAKING

- **A/E/C Overhead Crane Training Program**
  I developed a course for the training of architects, engineers and contractors on the special requirements for buildings in which there will be overhead cranes. The training course was used for training credits by the engineers and consisted of a couple hours' session and a handbook I put together listing all the required industry specifications. I gave this course at least once a quarter for the last decade. Although I never made a sales pitch, the purpose of the course was to elevate my company as the "go to" source for overhead cranes by virtue of our expertise and quality of the presentation.
- **Indiana OSHA Safety Training**
  I was asked on several occasions to teach parts of the standard OSHA 10 Hour and OSHA 30 Hour training program.
- **Society of Manufacturing Engineers** (SME)
  I spoke on crane maintenance and runway design at University of Michigan, Ann Arbor, Las Vegas, NV and Orlando, FL.
- **Association of Iron and Steel Technology** (formerly AISE)
  Spoke on crane maintenance and runway design at Cleveland, Ohio and Pittsburgh, Pennsylvania.
- **Fabricators & Manufacturers Association**
  Spoke on Open Book Management and Crane Safety at Las Vegas, NV, Fabtech/Chicago and Fabtech/Cleveland.

CONTINUING EDUCATION

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

- Cleveland Tramrail Product School at Wickliffe, OH
- P&H/Harnischveger Crane Maintenance School at Milwaukee, WI
- Dodge Power Transmission School, South Bend, IN
- Budgit/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, Harvard Business School, Professor Ben Shapiro
- Fundamentals of Sales Management, American Management Association, Chicago

IN-HOUSE PRODUCT TRAINING

I would bring in vendors to perform in-house training for my whole engineering and sales staff, rather than sending just one or two to the manufacturer's schools. This is just a small sampling of the schools that were 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
- DriveCon, Inc. Training
- Electromotive Variable Frequency Drive Training

CONTACT INFORMATION

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