**Trent** **Dean** **Tholen PE**

**Education:**

Bachelor of Science, Electrical Engineering, University of Utah, SLC, UT, JUN93

Master of Engineering-Electrical Engineering, University of Idaho, Power emphasis, AUG19

Registered Professional Engineer

**Experience/Work History:**

* 15 years full time employment at **HAFB**, Utah, 3 years at **Ramstein Air Base**, Germany

Supervisory General Engineer providing electrical engineering expertise in the areas of electrical troubleshooting of plant equipment and distribution systems, system design, code compliance, power quality analysis and instruction, Arc Flash analysis, electrical safety compliance and instruction, condition based maintenance, electrical accident investigations, energy savings initiatives, lighting design, static grounding, systems and component troubleshooting, magnetic field applications and so forth. Providing training in NEC Update, NFPA 70E electrical safety, Electric Motor analysis, and Power Quality Analysis.

* 5 Semesters teaching at **Weber State University**, Ogden Utah, part time

Developed and teaching ECE 3510 Fall semesters for the electrical engineering department at WSU. ECE 3510 includes both lectures and labs and covers fundamentals of electric machinery and power systems. Co-developed and taught ECE 5510, Advanced Power Systems, Spring 2021.

* 3 years part time employment at **Select Engineering Services**, Layton, Utah

Providing electrical engineering design for new building construction and renovations. Providing electrical power distribution and lighting design for new buildings such as churches, sports facilities, assisted living facilities, pump lift-station, etc. Providing electrical designs for updating existing facilities to bring them into code compliance during renovations. Providing training in NFPA 70E electrical safety, National Electrical Code, and Power Quality Analysis, for the state of Utah approved Professional and Core credits.

* 8 years full time employment at **JBT Aerotech**, Ogden, Utah

Designed, developed and implemented the CE Floor Product (leading commuter bridge product option) for JBT Aerotech (formerly FMC Airport Systems Jetway), patent 6898816. Led team of engineers and developed and implemented in 2 year time frame. Provided lighting, relay logic and PLC control design for Jetway Passenger Boarding Bridges. IESNA trained. Engineered and developed other components such as light fixtures, circuit boards, handrail systems, moving floor systems, sensor systems. Provided engineering for electric motors/transformers, VFD’s, PLC’s, HVAC, code compliance, lighting layout and design, canopy systems and system kits.

* 3 years full time experience at **Electro-Mechanical Services (EMS)**, SLC, Utah

Redesigned and rewound 3-phase and single phase specialty motors, DC motors, generators and apparatus, from fractional up to 8500 HP. Performed dynamic balancing, vibration analysis using spectrometers, and minor machining. Designed equipment for shop use and enforced EPA compliance. Provided field service equipment startup and troubleshooting.

**Skills/Accomplishments:**

Experienced in PLC, CAD, and Power Systems design software

Patents: US 6898816, CA 2423441