

## **Cyclone Engineer Alumni**

**Joe Musil**

**Director of Engineering (retired)**

**Iowa Manufacturing Co.**

Faculty Host: Scott Merkle

**April 02, 2019 at 11:00 am in 2004 Black**

### **Abstract**

Mr. Musil will discuss his experiences at Iowa State University, working in the machine shop and going to school at the same time. He will discuss the history of his employer, the Iowa Manufacturing Company owned by Raytheon and will go over some of the products the company produced, such as large crushers used in the recent expansion of the Panama Canal locks. He will touch on how the creation of the Environmental Protection Agency affected the construction equipment industry from test procedure protocol development, equipment design, testing equipment design, actual testing and compliance. He will discuss what patents are, the diverse elements, and examples of patents that were litigated extensively and share outcomes. Mr. Musil will give students insight on what potential employers look for during the interview process and give students real world advice on how to judge potential companies they are considering for employment.

### **Biography**

Joseph E. Musil is a retired director of Engineering from the Cedar Rapids Terex Company in Cedar Rapids, Iowa. He is a registered P.E. and a member of ASME. He received his BSME degree from Iowa State University in 1972. In July of 1972 he went to work for Iowa Manufacturing Co. in Cedar Rapids, Iowa which was owned by the Raytheon Company. While working there he began work on an MSME degree which he rec'd in 1976 from the University of Iowa. He worked his entire career at the same company, rising from Engineer to Director of Engineering. The company manufactured large heavy equipment for the quarry, construction and roadbuilding industries including rock crushers, screening plants, asphalt plants and asphalt pavers. The company also made equipment for waste to energy plants, soil remediation and military projects. The areas of engineering that he worked on included design of structures, mobile equipment, chassis, diesel engines use, hydraulics, power transmission, combustion burners, air pollution control equipment, power distribution, PLC's, safety reviews, regulation compliance, manuals, and permits. He interfaced with many state and federal agencies including EPA, OSHA, MSHA, CDC, and DOL. He worked with many industry groups including TRB, NAPA, NSA, and CEMA, also called AEM. He has traveled to all 50 states and to Europe, South America, India, China and Australia, many times. He has over 70 US Patents and many foreign patents. He has been involved in patent litigation and products liability matters for the company. He has "on the side" farmed raising row crops and cattle for most of this time and today continues to farm about 240 acres. He is married with 3 grown children.

***This seminar counts towards the ME 600 seminar requirement for Mechanical Engineering graduate students.***

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