



The Augustus Group
Chuck Levesque – Principal Engineer

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SUMMARY

Thirty years as a Metallurgical Engineer performing material property evaluations including -- mechanical and corrosion related testing, failure analysis, welding procedures and procedure qualifications, and material's characterization research. Mr. Levesque has managed numerous projects dealing with regulatory compliance (OSHA's PSM/MI and DOT Pipeline Safety - including audit programs for each), and Corrosion and Inspection Risk Assessments.

EDUCATION

Bachelor of Science in Metallurgical Engineering, 1970, Illinois Institute of Technology; Minor in Engineering Sciences and Psychology; Numerous ASM, AWS, NACE and company sponsored training courses

PROFESSIONAL EXPERIENCE

Materials Technology Group, L.L.C. Houston TX (Metallurgical Consultants) Formerly Engineering Data Services, Inc. (EDSI), Principal 1998 – Present

Conducted failure analysis of major refinery fires and conducted engineering review of their year old Plant Expansion Project to address metallurgy and corrosion design and fabrication related issues. Identified potential deficiencies and their recommended corrective action, upon completion conducted an evaluation of the refineries 80+ Fired Heaters and supported the ongoing Mechanical Integrity compliance efforts primarily developing Specific Equipment Plans (SEPs) and Process Specific Procedures (PSPs). Supervised numerous defined projects generating field sketches, compiling equipment data, generating inspection drawings and piping isometrics, determining TMLs and calculating retirement thickness values.

Near the end of 2002, reorganized 13 separate Inspection Compliance Projects into a more manageable and synergistic group of 6 projects; and from January 2003 through the end of 2004, functioned as Engineering Coordinator for the 6 projects and the Project Supervisor for 2 of the Piping related projects overseeing the collection and input of piping data, preparing and reviewing bid packages for contract NDE, and recommending repairs including coordination work with Turn Around Planning Groups. These projects are scheduled out over 12 years with an annual budget of \$8 to \$12 million per year.

**CONDEA Vista Company – Houston, TX (Manufacturer of Commodity Chemicals)
(Formerly Chemical Products Division, Conoco)****Manager, Maintenance and Engineering Technical Services, 1989 - 1998**

As the company's Sr. Materials Engineer from 11/89 through 7/91, specified materials of construction for chemical processing equipment in the company's 7 plants. Additionally, wrote or reviewed welding procedures (WPS & PQRs), performed failure analysis and corrosion monitoring studies, and resolved code interpretation issues involving pressure vessels, storage tanks and piping. When promoted to Chief Engineer in mid 1991, became more involved with code and regulatory compliance issues; and played a major role in the development of the corporate and individual plant Mechanical Integrity Procedures for compliance with OSHA's Process Safety Management, and coordinated the development of a DOT Pipeline Safety compliance program.

As Manager, Maintenance and Engineering Technical Services, supervised a small but elite group of specialists responsible for the company's Engineering Standards and Specifications, process equipment design reviews (material selection, welding procedure review, code and company specification compliance, and inspection during fabrication), as well as maintaining the routine failure analyses, pressure vessel ratings, code interpretations and providing training at the plants in each of these areas. Assisted setup an internal audit system complete with a defined protocol for auditing the PSM compliance at each of the company's regulated plants.

Hydril Co. Houston, TX (Manufacturers of Oilfield Equipment) Materials and Processes Manager Feb 1979 through Oct 1989

Manager of the Materials & Process group for the Tubular Products Division, with a staff of three metallurgists and two technicians worked as an effective team on both routine assignments and special projects.

Basic responsibilities included: 1) Developing and revising formal specifications to uniformly define materials purchased and manufacturing processes performed. 2) Develop and assist in implementing new processes for manufacturing. 3) Perform metallurgical failure analyses on components both from field/service failures and in-house process rejects to recommend corrective action. 4) Assist marketing with customer presentations involving new products, applications or new processing techniques used in manufacturing.

The marketing assistance frequently involved reoccurring issues that were resolved through writing formal papers to address the technical issues in a manner that was readily understood and that could be used to standardize the company's position on the issue. Most of these papers were also published in appropriate trade journals. The projects of particular interest included: 1) Developing a brush burnishing technique to improve the gall resistance of phosphate coated threaded connectors and

simultaneously increase productivity. With publication of work on this effort had a patent disclosure accepted and filed on. 2) Developing a material selection, heat treatment, surface texturing and ionnitriding cycle for Hydri's \$12 million/year thread gauge program and \$1.6 million/year hydrostatic pressure test closure usage that reduced overall processing costs by 15% and netted a 5 fold increase in useful life. 3) Developing an effective stress relief for cold formed products to counteract Bauschinger Effect and increase resistance to sulfide stress cracking. Since the standards of the industry said to avoid cold work and stress relief, this subject was of sufficient interest to have me invited to give a presentation on it before the API Standardization Committee in June 1982 and have a paper published in May 1983 and a second expanded version published July 1985.

Conducted value engineering studies aimed at solving product related field service problems and manufacturing cost reductions. Of particular interest worked to determine a cost effective means of preventing galling of threaded products on stainless steels and nickel base alloys. A portion of this study was also published and was instrumental in obtaining a \$7 million threading order away from Hydri's competition. The article dealt with the galvanic effects of surface treatments on corrosion resistant alloys in sour gas service.

**Howmedica, Inc. Dental Division, Chicago, IL (Manufacturer of Dental Supplies)
Group Leader Mfg. Engineering 1976 - 1979**

Supervised industrial and process engineers. Provided technical support to the company's manufacturing of precious metals, nonprecious high alloys, porcelains, plastics and lab equipment for dental laboratories. Acted as interface between manufacturing departments and Product Development, Marketing, Quality Control and Accounting. Restructured the Alloy Processing Department by upgrading processing procedures, cross training operators and assuming control of production planning. I developed a more accurate yet simplified method of inventory monitoring and control. I provided a strong initiative to Quality Control to change testing methods to a more realistic evaluation of required properties. Results included reduced reject rate from 14% to 2% and an increased net yield of saleable product from 48% to 82%. I developed a full documentation package to comply with GMP (Good Manufacturing Practices) requirement of the FDA. I started up a new line of precious alloy solders to be more fully competitive.

Sunbeam Appliance Co., Chicago, IL (Manufacturer of Small Household Appliances) Plant Metallurgist 1974 -1976

Responsible for Process Engineering assignments in all of the metal and related materials processing operations, especially troubleshooting areas impeding production or product quality in the areas of forming, joining and heat treating. Revised

specifications on materials and processes to optimize metalworking requirements. Maintained extensive contact not only with other engineering groups but also with vendor representatives and outside sources. Advantage of having flexible background aided in bringing in new product lines from inception to full production not only at main manufacturing plant but also at various assembly plants across the southern states.

**Universal Oil Products Corporate Research Des Plaines, IL Research Metallurgist
1970 - 1974**

Primary responsibility was the selection, treatment and evaluation of materials for use in automotive emission control systems especially for the UOP oxygen sensor. Personally developed an expertise in ceramic-metal bonding. Liaison and coordinator of project efforts between Material Science Department and Automotive Engineering. Supervisor of heat treatment laboratory and two technicians. Three patents issued and 13 accepted disclosures.