

## Curriculum Vitae:

### J. Michael York, P.E.

#### SUMMARY

Registered Professional Engineer with more than 45 years experience in Materials engineering evaluations, failure analysis, accident reconstruction, fire cause analysis, slip and fall accidents and industrial failures. Has over 40 years of fire cause and origin investigative and expert witness experience. Experienced in the forensic evaluation of automotive and truck components, medical implants, plastic and metal plumbing fixtures and piping, welds, mechanical assemblies, industrial equipment and components. Working knowledge of mechanical testing of materials for the evaluation of suitability for a particular application. Knowledgeable in the structure and properties of titanium and titanium alloys used in aerospace applications and corrosive environments. Has given testimony over 100 times in trials, arbitrations and depositions.

#### PROFESSIONAL EXPERIENCE

**Kent Engineering, LLC.** –Seattle, WA, (2016-Present). Senior Materials Engineer. Specializes in material characterizations and failure analysis of metals, polymers, composites in various industries, including: accident reconstruction involving passenger vehicles, trucks, off-road equipment and pedestrians, fire cause and origin, plumbing and construction related failures, failure analysis of a variety of metallic and non-metallic materials. Performs fracture examinations involving optical microscopes and a scanning electron microscope. Supervises or conducts materials testing involving hardness determination, tensile testing, chemical analysis by energy dispersive x-ray analysis and surface analysis by focused ion beam.

**Professional Registration Committee (PE licensing)** – Active member of the Professional Registration Committee PE Metallurgical and Materials Exam, National Council of Examiners for Engineering and Surveying (NCEES). Selected to prepare and review exam questions and discuss appropriate level of knowledge for young engineers.

**York Engineering Services** – Corvallis, Oregon, (1992 – 2016). President/owner

**Accident and Failure Investigations(AFI)** – Corvallis, Oregon, (1979 - 1992). Engineer, Vice President, Part Owner

Professional Engineer involved in over 450 investigations of failures of metal and plastic components used in construction, industrial equipment, motor vehicles, bicycles, ocean and fresh water vessels, aircraft and medical implants. Has performed failures analyses of PVC and CPVC pipe and fittings, plastic water filters, seat belts and load straps, plastic chair components and fiberglass ladders. Has evaluated metal and plastic fracture surfaces for fracture mechanism. Performed metallographic sample preparation and

microstructure evaluations. Conducted mechanical testing for strength and material hardness.

Has over 40 years of fire cause and origin investigative and expert witness experience. Has examined electrical and mechanical components to evaluate evidence of a potential source for initiation of a fire in buildings and machinery.

Reconstructed and analyzed over 900 accidents involving passenger vehicles, trucks, ATVs, motorcycles, bicycles and pedestrians. Has performed downloads or imaging of data from vehicle airbag control modules using CDR/Bosch instrumentation. Evaluated accidents with respect to speed, improper lane, visibility, lighting and time/distance issues. Has performed evaluations of walking surface slip resistance using a variable incidence tribometer (VIT).

**Oregon Metallurgical Corporation – Albany, Oregon (1974 – 1979)**

Metallurgical Laboratory Supervisor

Staff engineer performing mechanical testing and microstructural evaluations of a variety of titanium and titanium alloy products for compliance to specification requirements. Signature authority for compliance of all testing to ASTM, AMS and military specifications. Conducted defect analysis of titanium products by coordinating with nondestructive inspection personnel to locate defect. Characterized defect structure and determined chemical composition employing off-site electron microprobe.

**Chemeketa Community College – Dallas, Oregon (9/1978 – 12/1978)**

Part-time Instructor – Fundamentals of Metallurgy

**PROFESSIONAL REGISTRATIONS**

Registered Professional Engineer, State of Oregon, #11501

**EDUCATION**

B.S. Metallurgical Engineering, Oregon State University, 1974

M.S. Material Science, Oregon State University, 1980

**PROFESSIONAL ASSOCIATIONS**

The American Institute of Mining, Metallurgical and Petroleum Engineers (TMS). Vice Chairman-1981, Secretary-Treasurer-1982, Chairman-1983 – Oregon Section.

ASM International

The International Metallographic Society

Society of Automotive Engineers

**PUBLICATIONS**

“High Beam and Low Beam Filament Identification in Dual Filament Headlamp Sealed Beams and Replaceable Bulbs”; Human Factors: Lighting, Mirrors and User Needs, SP-1033, Society of Automotive Engineers, Inc., February, 1994.

“The effect of Alpha Phase Morphology on the Mechanical Properties of Commercial Purity Titanium”; Metal Science, Vol. 17, February, 1983.

“Corrosion Characteristics of Titanium and Stainless Steel in Solutions Containing Nitric Acid, Citric Acid and Magnesium Chloride”; (Peter Ciriscioli-principal author), ASTM special technical publication #728, March, 1981.

“A Metallographic Study of the Variation of Fracture Morphology of Ti-6Al-4V with Solution Treating Temperature”; Metallography, Vol. 1, 1979.