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SANGJOON (JAY) SOHN, Ph.D., P.E.
SENIOR CONSULTANT

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Dr. Sohn is a Senior Consultant in the Mechanics Practice Group at ESI's office in Peachtree Corners, GA. He is a Licensed Professional Engineer with a Doctorate Degree in Materials Science and Engineering. His areas of expertise include applied mechanics, stress analysis, fracture mechanics, fatigue analysis, and finite element analysis. With over 10 years of industrial experience in the design and analysis of mechanical components with leading manufacturers and engineering firms, Dr. Sohn provides subject matter expertise in modeling and solving highly non-linear problems via finite element analysis. In his role as a Senior Consultant at ESI, Dr. Sohn has provided technical consultancy in numerous litigation and failure analysis projects involving mechanical behavior of materials, fracture and fatigue of materials, and mechanical stress analysis.

Some of the examples of his work include failure analysis of pipelines, flow control equipment, pressure vessels, and stress analysis of automotive, aircraft components, medical, and commercial products. In addition to the design and analysis engineering work examples listed above, he has had successful experiences in international projects involving multi-national clients.

Dr. Sohn is currently a member of ASME, ASTM International, and ASM International. He contributes voluntary time to ASM International as a reviewer for the Journal of Failure Analysis and Prevention (JFAP).

Areas of Specialization

Applied Mechanics
Fracture Mechanics
Fatigue Analysis
Finite Element Analysis (FEA)
Stress Analysis

Education

Ph.D., Materials Science & Engineering, University of Tennessee, Knoxville, 2007
M.S., Mechanical Engineering, Chung-Ang University, Seoul, South Korea, 1999
B.S., Mechanical Engineering, Chung-Ang University, Seoul, South Korea, 1997

Licensed Professional Engineer (P.E.)

State of California License No. M39704
State of Washington License No. 24011240

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Professional Affiliations

American Society of Mechanical Engineers (ASME)

Member

American Society for Testing and Materials International (ASTM International)

Member

American Society for Metals International (ASM International)

Member

Reviewing Referee, Journal of Failure Analysis and Prevention

Positions Held

Engineering Systems Inc., Norcross, GA

Senior Consultant, Mechanics Practice Group, 2017 – Present

Freudenberg Oil & Gas Technologies, Houston, Texas

Engineering Manager, Metal-to-Metal Sealing Solutions, 2014 – 2016

McDermott International, Houston, Texas

Senior Subsea Engineer, Subsea Engineering Department, 2012 – 2014

Cameron International Corporation, Houston, Texas

Senior Engineer, Technology Group, 2007 – 2012

KRISS (Korea Research Institute of Standards and Science), Yusong, South Korea

Associate Research Staff, Materials Strength Group, 1997 – 1999

Publications/Presentations

“Merging ASME and API Design Methods for Subsea Equipment Up To 25,000 PSI Working Pressure,” C. Kocurek, P. Pathak, C. Melancon, **S. Sohn**, OTC Publication, 2012

“Measurement of power-law creep parameters by instrumented indentation methods,” C. Su, E. Herbert, **S. Sohn**, J. LaManna, W. Oliver, G. Pharr, Journal of the Mechanics and Physics of Solids, 2012

“On the Measurement of Creep by Nanoindentation with Continuous Stiffness Techniques,” A. Rar, **S. Sohn**, W. Oliver, D. Goldsby, T. Tullis, G. Pharr, MRS Proceeding, 2011

“A Study of Indentation Creep Using the Finite Element Method,” **S. Sohn**, Doctoral Dissertation, The University of Tennessee, 2007