



David E. Dix, P.E.
Mechanical Engineering

Mr. Dix has thirty years of consulting experience in the analysis, testing, and inspection of mechanical systems. This work has included failure analysis, accident investigation and reconstruction, design review and evaluation, machinery and product testing, motion and still photography analysis including photogrammetry, stress analysis using finite element and classical techniques, fluid mechanics, heat transfer, dynamic and static testing, and durability testing.

Employment

1995-present	Principal, Unified Engineering, Inc.
1995	Manager of Mechanical Engineering, Packer Engineering, Inc.
1983-1995	Staff Consultant, Packer Engineering, Inc.
1982-1983	Short term missionary in Zaire, Africa Inland Mission

Education

1988	M.S. in Mechanical Engineering, University of Illinois at Chicago (Thesis: <i>Heat Transfer From a Sphere in Natural and Forced Convection of Subcooled Freon-113</i>)
1982	B.S. in Mechanical Engineering, John Brown University, Arkansas

Continuing Education

2011	Tire & Wheel Safety Issues – Society of Automotive Engineers
2010	PhotoModeler - Collision Reconstruction
2009	CDR Technician and CDR Data Analyst Course – Collision Safety Institute
2007	Heavy Vehicle Crash Reconstruction; NW University Center for Public Safety
2007	Crash Data Retrieval Technician Training- Collision Safety Institute
2004	Traffic Accident Reconstruction II; Northwestern University- Traffic Institute
1998	Traffic Accident Reconstruction I; Northwestern University- Traffic Institute
1996	Digital Video International; Adobe
1993	The Bolted Joint; ASME
1989	Vibration Measurement and Analysis; Bruel & Kjaer

Professional license and registration

Professional Engineer, State of Illinois, License Number 062-047674

Accreditations

The Accreditation Commission for Traffic Accident Reconstruction (ACTAR) #2345

Professional Societies

American Society of Mechanical Engineers
Society of Automotive Engineers

Selected Publications

“An Experimental Study in Nucleate Boiling Heat Transfer From a Sphere”,
Collected Papers in Heat Transfer, (D. Dix, J. Orozco, and H. Francisco),
ASME Heat Transfer Division, Volume 104, 1988

“An Experimental Study in Nucleate Boiling Heat Transfer From a Sphere”,
Journal of Heat Transfer, (D. Dix and J. Orozco), Transactions of the ASME,
February 1990

“Film Boiling Heat Transfer From a Sphere in Natural and Forced Convection
of Freon-113”, *Journal of Experimental Heat Transfer*, (D. Dix and J. Orozco),
Volume 3, No. 2, 1990

“Accident Reconstruction”, presented at Association of Iron and Steel Engineers
conference on New Handling Technology for Material and Scrap, 1998