THE EXPERTS
Robson Forensic

BRIAN M. KELLY, P.E.
Marine and Mechanical Engineer

Experienced in the design, installation, testing, startup, safe operation, maintenance, modification, troubleshooting, upgrade and repair of marine and industrial machinery, equipment and systems.

Manufacturing Processes: General machining, metal forming, welding, brazing, grinding, soldering, oxyacetylene cutting, air arcing, aligning, shrink fitting, assembly of machined components.

Piping and Pressure Vessels: Piping and Pressure Vessels (vacuum up to hydraulic pressures) – pipe welding and threading, flanges, butt-weld fitting, socket weld fittings, thread-o-let, sock-o-let, ASME B31.1 and B31.7, ASME Sections III, VIII, IX and XI, ASME Code stamping – unfired and repaired pressure vessels, piping supports, insulation, inspection, fouling, corrosion, failure analysis, leak injection methods, freeze seal methods, use of saddles, blind flanges, spectacle flanges, Non-destructive Examination (NDE) techniques.

Manufacturing Procedures, Standards and Specifications: Pressure vessels, power piping, pipe welding, structural welding, steel specifications, drawing standards, component procurement specifications, technical bid evaluations.

Testing Methods and Specifications: Pump performance testing, post maintenance testing, post modification acceptance testing, development of modification acceptance test plans, hydrostatic testing, vibration testing, high speed dynamic balancing, material testing, factory witness testing.

Engineered Systems: Steam, condensate, feedwater, heater drain, reactor coolant, primary and secondary cooling, radioactive and radwaste, high pressure and low pressure injection, containment cooling, emergency core cooling, charging, boric acid makeup, process water, potable water, deionized water, refrigeration, salt water service, ballast, tanker cargo, fire protection, waste water, hydraulic power/electro-hydraulic control, pneumatic power, pneumatic control, heating, ventilating and air conditioning, vacuum, exhaust, sampling.

Machinery: Vertical and horizontal single and multi-stage pumps up to 120,000 gpm, vertical turbine pumps, mechanical seals up to 2250 psi, diesel engines, heat exchangers, turbines, compressors, air handlers, air ejectors, vacuum pumps, venturis and flow measuring equipment, valves, jib cranes, monorail cranes and hoists, overhead bridge cranes, high-speed centrifuges, cable winches, drive gears, clutches, distillers, chillers, cooling towers, boilers, milling machines, lathes, presses, spreader beams, lifting and rigging gear.

Machinery Safeguarding: Safety interlocks, drive guards, operational guards, pinch point guards, failsafe modes, caution and warning signs, instruction manuals.

Safety Procedures and Requirements: Material safety data sheets, confined space entry, electrical and mechanical hazards and energy control, lockout/tagout, equipment clearance order, scaffold and fall protection, training, policies and procedures, inspections, OSHA requirements, personnel protective equipment, safety meetings.

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Tools: Laser alignment equipment, micrometer, dial indicator, die grinder, cut off wheel, rigging, hand and pneumatically operated grease gun, welding, air arcing, torch cutting, soldering torch and gun, pipe threading machine, torque wrench, torque multiplier, hy-torque wrench, impact wrench, pneumatic and powder actuated nail gun, hammer drill, sawzall, porta-band saw, lathe, drill press, gas powered and electric chain saws, radial arm saw, table saw, skill saw, jig saw, router, portable planer, diamond wheel tile cutter, angle grinder, heat gun, screw gun, polisher and buffer, sander, bench grinder, electric and pneumatic reciprocating hammers, portable cement and mortar mixers, dirt compactor, stump grinder, riding lawnmower, hedge trimmer, weed eater, edger, pressure washer.

Regulatory Compliance: 10CFR50.59 applicability determinations, screenings and evaluations for compliance with plant technical specifications and Updated Final Safety Analysis Report (UFSAR), Nuclear Regulatory Commission (NRC) and Institute of Nuclear Power Operations (INPO) interface.

PROFESSIONAL EXPERIENCE

2016 to present — **Robson Forensic, Inc.**
Associate
Provide technical investigations, analysis, reports, and testimony toward the resolution of commercial and personal injury litigation involving marine, manufacturing and other mechanical engineering issues.

2016 — **SUNY Maritime College**
Engineering Training Officer/Training Ship Empire State VI
Temporary position for Summer Sea Term 2016 on board the Training Ship Empire State VI instructing cadets in the proper use of tooling, machinery basics as well as detailed oral quizzes related to shipboard mechanical machinery and equipment.

2014 to 2016 — **Florida Power and Light Company, Corporate Office**
Staff Engineer/Nuclear Engineering Chiefs Department
Responsible for providing oversight and technical assistance for a wide array of mechanical equipment at five nuclear sites (eight units) within the FPL/NextEra Energy company.

2013 to 2014 — **Florida Power and Light Company, St. Lucie Nuclear Power Station**
Mechanical Engineer (Contract Position)
Prepared engineering change (EC) design packages for Fukushima related modifications to address NRC Order EA-12-049.

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2011 to 2013 **Florida Power and Light Company, St. Lucie Nuclear Power Station**
Mechanical Engineer (Contract Position)
Primary responsibilities include: 1) Direct involvement with all aspects of the Extended Power Uprate (EPU) Project with particular emphasis on pumps, mechanical seals, heat exchangers and associated equipment and controls, 2) Fulfill roles and responsibilities of Project Manager and Project Engineer for feedwater pump, condensate pump and heater drain pump replacements (total of eleven pump replacements) involved with resolution of all technical and field related matters, 3) Prepare and verify complex EC modification packages in accordance with applicable regulatory and code requirements, 4) Prepare and verify design basis document changes and FSAR change packages and, 5) Provide technical support and resolution of interferences for field installation activities.

2011 **Progress Energy, Crystal River Nuclear Power Station**
Mechanical Engineer (Contract Position)
Prepared EC modification packages for safety related motor operated valve (MOV) replacements in accordance with Progress Energy procedures and worked closely with A/E firms for development of MOV weak link analyses.

2000 to 2011 **Florida Power and Light Company, St. Lucie Nuclear Power Station**
Principal Engineer 2000 to 2007
Staff Engineer 2007 to 2011
Primary responsibilities included: 1) Review and revise equipment bid specifications for feedwater pumps, condensate pumps, heater drain pumps, feedwater heaters, moisture separator reheaters, turbine cooling water heat exchangers, turbines, and miscellaneous valves, 2) Work with vendors to develop conformed specifications for aforementioned equipment, 3) Develop and verify bid evaluations for aforementioned equipment, 4) Review vendor drawings, procedures, manuals, calculations and other vendor supplied documents, 5) Review AFT Fathom and Proto-Flo hydraulic models, 6) Review and provide input to complex EC modification packages and resolve technical issues, 7) Verify AE firm calculations to support EPU conditions, 8) Work directly with maintenance and operations in troubleshooting and resolving rotating equipment and system problems and provide technical direction for same, 9) Fulfill roles and responsibilities of Mechanical System Engineering Supervisor and Project Manager, 10) Provide input to critical maintenance activities to ensure assigned structure, system and component performance goals are properly considered, 11) Resolve apparent and root cause condition report discrepancies for all aspects of rotating equipment, 12) Support Event Response Teams to address plant events, 13) Administer the Maintenance Rule Program for assigned systems.

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1998 to 2000 **Public Service Electric & Gas Company, Salem & Hope Creek Generating Stations**
Senior Plant Engineer
As Project Engineer for feedwater heater and moisture separator reheater tube bundle replacement modifications, primary responsibilities included: 1) Plan, coordinate and schedule complex modification work, 2) Develop and review detailed equipment specifications and review vendor drawings, manuals and proposals, 3) Perform, review and present 10CFR50.59 applicability reviews and safety evaluations, 4) Resolve field technical issues and interferences, 5) Resolve condition and discrepancy reports, 6) Develop modifications to optimize MSR efficiency.

1990 to 1997 **Florida Power and Light Company, St. Lucie Nuclear Power Station**
Senior Plant Engineer
Primary responsibilities included: 1) Troubleshoot and resolve plant rotating equipment problems including pumps, mechanical seals, motors, compressors, emergency diesel engines and turbines and work directly with the planning and maintenance organizations, 2) Work with vendors to complete inspections and overhauls of pumps and plant equipment, 3) Perform root cause evaluations for rotating equipment malfunctions and develop and implement countermeasures to prevent future failures, 4) Develop and revise overhaul and preventative maintenance procedures for all plant rotating equipment, 5) Perform duties and responsibilities of emergency diesel generator overhaul Project Manager, 6) Address regulatory and industry issues and incorporate modifications to improve component and system performance.

1985 to 1990 **North American Trailing Company**
Chief Engineer
Supervise operation and maintenance procedures, including troubleshooting and repair of pumps, electric motors, controllers, diesel engines, hydraulic equipment, automatic controls and related components. Collaborated with mechanical contractors on the planning and coordinating of the successful installation of varied new systems and controls. Position required extensive hands-on operating and maintenance experience with all aspects of rotating equipment in a marine environment.

1984 to 1985 **CDI Marine Company**
Engineer
Completed varied tasks including fluid flow calculations, computer aided steam pipe stress analysis, system design, developed machinery specifications, sizing of steel structures and inclining experiments.

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1982 to 1984 **North American Trailing Company**
Second Assistant Engineer/Third Assistant Engineer
Responsible for the operation and maintenance of pumps, electric motors and controllers, diesel engines, hydraulic equipment, automatic controls and related components. Position required extensive hands-on operating and maintenance experience with all aspects of rotating equipment in a marine environment.

1980 to 1982 **Marine Engineers Beneficial Association, District 1**
Third Assistant Engineer
Responsible for the operation and maintenance of various oil fired steam turbine shipboard power plants. Performed preventative maintenance and repair procedures on pumps, boilers, turbines, condensers, distilling plants, purifiers and associated equipment and controls.

PROFESSIONAL CREDENTIALS

Professional Engineer: DE
United States Coast Guard (Inactive)
- Chief Engineer of Motor Vessels, Any Horsepower
- Second Assistant Engineer of Steam Vessels, Any Horsepower

EDUCATION

State University of New York (SUNY) Maritime College, New York City
Bachelor of Engineering Degree

Continuing education
EPRI Turbine-Generator Users Group Meeting and Vendor Exposition
Engineering Ethics: The Fukushima Nuclear Plant Disaster
Engineering Ethics: The Challenger Disaster and the Story of "The Five Lepers"
Engineering Ethics: The Ford Pinto Exploding Fuel Tank
Fluid Flow Fundamentals
Pump Suction Characteristics
University of Delaware Mechanical P.E. Review Course
EPRI Heat Exchanger Maintenance and Repair Course
Engineering Support Personnel Training
Ludeca Seminar for Instructors in Conventional and Laser Shaft Alignment
Bentley Nevada Machinery Diagnostics Course
Sulzer Bingham Centrifugal Pumps Hands-On Training Seminar
IRD Mechanalysis Vibration Technology I and Preventative Maintenance Program Concepts
Entek IRD Introduction to Vibration

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University of North Florida EIT Review Course
General Motors Electro Motive Diesel Training
MicroStation J Fundamentals
Conger & Elsea, Inc. Root Cause Analysis Techniques
Dale Carnegie Course
Applied Flow Technology (AFT) Fathom Modeling
Proto-Hx Heat Exchanger Modeling Software
SKF Field Bearing Maintenance Seminar
Fisher-Rosemount Valve Engineering Short Course
Basic Feedwater Theory Training
Turbine Generator Maintenance
Design Engineer qualified to Florida Power & Light and Progress Energy procedures

PROFESSIONAL MEMBERSHIPS

American Nuclear Society
SUNY Maritime College Alumni Association

OTHER

Recreational boater, 1989 - present