

CHAD N. FUHRMANN

Marine/Mechanical Engineer, Project Manager

GENERAL

USCG Licensed Chief Engineer (Unlimited Horsepower – Motor), Second Assistance Engineer (Unlimited Horsepower – Gas Turbine), Third Assistant Engineer (Unlimited Horsepower – Steam)

Survey and assurance professional, familiar with engineering ethics and practiced in the procedures, techniques, and principles surrounding industrial and marine fitness for purpose / operations, and general condition surveys of equipment, systems, installations, company and situational policies and practices, as well as incident / accident investigations

Experienced in the installation, start-up, operational verification, testing, safe operation, maintenance, upgrade, modification, troubleshooting, and repair of marine and industrial machinery and systems; well versed in the policies and procedures surrounding operation and testing of same

Business Management – Small business operations, tracking profits & losses, business development, and personnel development

Project Management – Management/control of quality of delivered reports, coordinating execution of services and operational management of employees and contractors conducting operations and task execution globally; project manager, managing fleetwide projects for the standardization and operational upgrade of large fleets of offshore vessels; responsible for the on time and on budget delivery of multi-million dollar valued projects

Marine & Offshore Activities – ROV, commercial diving, search and recovery, subsea construction, cable & pipe laying, seismic, offshore supply, platform supply, recreational diving

Shoreside Operations – Project management, personnel supervision & management, competency assessment, training program development & execution

Industrial Safety & Operations -- Firefighting methods & equipment, hazardous waste operations, oil spill cleanup and operations management

Marine & Industrial Engines – Emergency, critical, and routine maintenance, including complete engine rebuild (top end and in-frame), spare parts ordering & tracking on large diesel engines and support / ancillary equipment & systems

Auxiliary Machinery Systems – Fuel & lubricating oil filtration & purification, seawater distillation, air compressors, heat exchangers, refrigeration & AC compressors, boilers, air handlers, valves and fittings, cranes, winches, capstans, cargo machinery, milling

machines, lathes, drive gears, clutches, lifting gear appliances and securing arrangements, steering gears, hydraulic power systems

Environmental Studies – Research in marine industry green energy solutions and associated technologies, efficiency upgrades, engine NOX/SOX and particulate emissions, and alternative propulsion

Machine Shop Equipment, Procedures, & Processes –General machining, lathe work, milling machine operation, TIG & stick welding, brazing, grinding, soldering, oxyacetylene & plasma cutting, shaft & coupling alignment, piping alignment & fitting, and valve grinding projects

Machinery Safety & Safeguarding – Safety equipment, personal protective equipment, safety interlocks, failsafe modes, warning signage, machine guards, drive guards, company & equipment specific operating/instruction manuals, industrial controls, fire prevention

Tools – Drill press, lathes, milling machines, band & circular saws, rotary drills & grinding equipment, impact wrenches, nail guns, hand tools, blacksmithing equipment & techniques

Industrial Procedures, Standards, & Specifications – Application of best / recommended practices for the repair, maintenance, upkeep, calibration, adjustment and operation of industrial power distribution, cooling, compressed air, lubrication, system status & alarm monitoring systems

Gap Analyses – Examination/comparison of company and vessel/site specific policies, procedures, preventive maintenance programs, and operational activities against industry and international recommended practices and standards.

Test Methods, Specifications, & Procedures – Failure Modes and Effects Analysis (FMEA) testing & verification on complete installations, test witnessing of FMEAs, Factory Acceptance Tests (FATs), Customer Acceptance Tests (CATs), fitness for purpose surveys, assurance testing & surveys; new & rebuilt equipment run-in and calibration, vibration analysis, and material specifications

Procedural & Safety Requirements – Material Safety Data Sheets, right-to-know, stop work responsibility, confined space entry, firefighting procedures, lockout/tag-out, training policies, learning processes, competency assessments, survey & inspections, hazardous material spill response

Program Implementation – Corporate, management, safety, guidance, and procedural program implementation in industrial and office environments

Training Program Development – Gap analysis of personnel core competencies and the development, execution, and implementation of new training programs based on analysis results and industry trends

Class Societies and Regulatory Compliance – Germanischer Lloyd, Lloyd's, American Bureau of Shipping (ABS), Det Norske Veritas (DNV), IEEE, IMO, IMCA, ISM, MARPOL, MTS, OCIMF (OVID, SIRE, etc.) OSHA, USCG, various UK regulations for offshore operations, lifting appliances

Specialties – Marine survey, fitness for purpose assessment, dynamic positioning, engineering ethics & principles, gap analysis of policies & procedures, competency assessment, instruction, training, and professional development programs

Interests – Engineering philosophy and ethics, scuba diving, metal work, blacksmithing, industrial art

CURRENT PROFESSIONAL EXPERIENCE

2014-present **Maritime Assurance & Consulting Ltd** *USA*
Business Director, Americas

Responsible for the development of MAC's US based operations; Tasked with seeking out regional and international business opportunities with both new and existing clients; Develop, coordinate, and implement a US regional marketing strategy designed to maintain and increase existing business and capture new opportunities

Responsible for all operating aspects of US division, to include business development; financial management; project launch, management and execution; professional development

Additional responsibilities include shoreside and offshore project related activities such as desktop engineering analyses and onsite testing of equipment, systems, and installations; Developing proposals in response to requests for proposals and coordinate account startup and transition service or product delivery; Expert witness services

2014-present **(R)Evolution Consulting & Engineering Services LLC** *USA*
Independent Marine Consultant

Engineering consulting company providing contract marine consulting services and engineering expertise

Authored and published papers in professional journals on several industry topics including the regulatory trends in the U.S. Gulf of Mexico

Presented at various international industry events

Published, quoted and/or referenced in industry leading publications

Experienced in developing Critical Activity Mode of Operation (CAM), Task Appropriate Mode of Operation (TAM), and Activity Specific Operating Guidelines (ASOG)

Developing industry wide training and development program for DP surveyors and auditors

Responsible for the research and write-up of Failure Modes and Effects Analyses (FMEA), Proving Trials, Annual DP Trials, Company DP Operations Guidance, and Vessel DP Operations Manuals for all types of DP capable assets

2014-present **National Offshore Safety Advisory Committee** USA
Member (by DHS appointment)

Current Activities **Global Maritime Industry** Worldwide

- Advising USCG on US response to International Maritime Organization Marine Safety Committee Circular 645 – “Guidelines for Vessels with Dynamic Positioning Systems”
- Advising International Marine Contractors Association on international response to International Maritime Organization Marine Safety Committee Circular 645 – “Guidelines for Vessels with Dynamic Positioning Systems”
- Subcommittee Chairman – Marine Technology Society, DP Testing Subcommittee

PREVIOUS PROFESSIONAL EXPERIENCE

2010-2014 **DNV GL (formerly GL Noble Denton)** Houston, TX
Dynamic Positioning Assurance Lead, Americas

DP authority providing Dynamic Positioning assurance, marine engineering assurance, fitness for purpose surveys and consulting services, general marine assurance survey and inspection, incident investigation, and a variety of additional professional services

Tasked with maintaining quality of delivered reports, coordinating execution of services and management of surveyors and DP Group personnel offshore and shoreside

Project manager, managing fleetwide projects for the standardization and operational upgrade of large fleets of offshore vessels

Responsible for the on time and on budget delivery of multi-million dollar valued projects

Qualified marine surveyor, certified by OCIMF and experienced in performing IMO/IMCA CMID and equivalent surveys

Developed GL Noble Denton’s DP Proficiency Development Program for application and implementation on board DP vessels and shoreside; designed program for the continuing improvement of DPOs, DP Engineers, and shoreside support staff

Past participating member of two small working groups advising the National Offshore Safety Advisory Committee generating guidance for USCG regulation of DP industry

Past participating member of Marine Technological Society advisory committee developing guidance for the MTS DP Guidelines

Published paper on the regulatory trends in the U.S. Gulf of Mexico; represented GL Noble Denton as a speaker and presenter at the 2011 European DP Conference

Published paper on the regulatory trends in the U.S. Gulf of Mexico for presentation at 2012 Asian DP Conference

Quoted and/or referenced in industry leading publications including the Aug/Sept 2011 issue of Marine Electronics & Communications, and the May 2012 issue of Professional Mariner,

Experienced in developing Critical Activity Mode of Operation (CAMO), Safest Mode of Operation (SMO), Activity Specific Operating Guidelines (ASOG), etc. and participant in Shell working groups for associated training and program development

Developed GL Noble Denton's in house training program for DP surveyors and auditors on conducting and reporting on Annual DP Trials, CMIDs, OVIDs, DP Assurance Auditing, Incident Reporting, etc.

Responsible for the research and write-up of Failure Modes and Effects Analyses (FMEA) and Proving Trials for new build dynamic positioning-equipped vessels and revision/rewrites of FMEA documentation and Annual Trials for existing vessels

Conduct vessel inspection and dynamic positioning proving trials for the verification of FMEA documentation and engineering assurance on a variety of vessels including diving, subsea construction, research, and offshore supply vessels

Assisted in the vessel assurance, demobilization, and decontamination of support vessels as a part of the BP Incident Management Team following the Deepwater Horizon tragedy

2008-2010

nfm Consulting, LLC

United States

Owner / Principal

Engineering consulting company providing contract marine consulting services and engineering expertise

Responsible for all operating aspects of Limited Liability Company, to include business development; financial management; project launch, management and execution; professional development

Marine engineering consultant/surveyor with GL Noble Denton providing professional marine services to major companies from all sectors of the marine industry including oil majors and offshore service companies

Contracted consultant with Gallagher Marine Systems, Inc., emergency responder, serving in an "on call" capacity for marine environmental emergencies

Contracted consultant with Global Maritime and Transportation School, providing a variety of services to GMATS including professional consulting and instructional services in industry and government sectors

Participated in professional advisory committee to the US Navy, LPD vessel propulsion committee, providing maritime industry insight into shipbuilding and operating requirements; investigating sources of engine failure, sources of lubricating oil contamination, and operational faults

2007-2008
Chief Engineer

Oceaneering International

Houston, TX

Accountable for all operational aspects of propulsion and all shipboard main and auxiliary equipment including operating condition and routine maintenance, spare parts orders and tracking, safety equipment, and preventive maintenance programs

Responsible for the management of and safe and effective training of all shipboard engineering personnel

Supervised execution of day to day operations, routine and emergency operations, fueling, and supplies and equipment loading/offloading

Developed and implemented DuPont Safety Training Observation Program (STOP™) for the unique working environment found on board offshore vessels

1998 -2007

Oceaneering International

Houston, TX

First, Second, & Third Assistant Engineer

Experienced in performing critical and routine maintenance on marine diesel engines including Bergen, Mercedes, Caterpillar, Sulzer, MAN B&W, Enterprise, and Saab

Performed underway repair work as required on main engines and ancillary equipment, including equipment tear downs and rebuilds as well as repairs utilizing TIG and stick welding, brazing, and various machining operations

Ten years of experience in all general machine shop operations including welding, brazing, lathe, milling machine, etc.

Certified crane operator

PROFESSIONAL QUALIFICATIONS, CERTIFICATIONS, & TRAINING

Maintain current U.S. Coast Guard Chief Engineer's license (diesel engine, unlimited), Second Assistant Engineer's license (gas turbine, unlimited), and Third Assistant Engineer's license (steam/boiler plant, unlimited)

Maintain all requirements for certifications, including STCW and TWIC qualifications

Maintain all training requirements for area-specific projects including HUET, Safe Gulf, and BP 6-in-1

Oil Companies International Marine Forum (OCIMF), Offshore Vessel Inspection Database (OVID) approved surveyor

Attended Shell training seminars and training courses on Critical Activity Mode of Operation (CAMO), Activity Specific Operating Guidelines (ASOG), and Activity Marine Operating Guidelines (AMOG)

Attended Kongsberg maintenance course for KPOS and SDP dynamic positioning systems

Hazardous Waste Operations and Emergency Response (HAZWOPER) trained

Hold current U.S. passport and accustomed to domestic and international travel

Experienced in supervising, working with, and interacting among work people of many nationalities

CONTINUING EDUCATION & COURSEWORK

2014-2015 **Louisiana State University** Baton Rouge, LA
E.J. Ourso School of Business – WorkBoat Strategic Leadership Development Program

Member of pioneering leadership development program designed specifically for the marine industry

Recipient of Faststream Recruitment Group's inaugural Scholarship for Leadership Excellence

2014 **NTSB Academy** Washington, D.C.
Marine Accident Investigation Course

EDUCATION

2006-2009 **U.S. Merchant Marine Academy** Kings Point, NY
Master of Science Degree – Marine Engineering

Member of first class to graduate from the Master of Marine Engineering Program

Maintained a GPA exceeding 3.5 for the duration of the three year program

Recipient of American Bureau of Shipping Continuing Education Scholarship, 2008 for thesis research in green energy and associated technologies for the marine industry; received highest grade of "A" on submitted thesis paper

1993-1998

U.S. Merchant Marine Academy

Kings Point, NY

Bachelor of Science Degree – Marine Engineering

Leadership positions include Regimental Fitness Officer, Company Training Officer, and Drill Instructor

Member of Regimental Band, section leader, representing Academy at formal functions including 1996 Presidential Inaugural Parade, 1994 Queen Elizabeth II 50th Anniversary D-Day Cruise

Member of Academy Crew Team

1991-1993

New Mexico Military Institute

Roswell, NM

Associate of Arts Degree

Leadership positions include Platoon Leader, Squad Leader, and Training Cadre/Drill Instructor

Member of Cadet Corps Band, section leader

MILITARY EXPERIENCE

Upon graduating from the U.S. Merchant Marine Academy in 1998, received commission in the U.S. Naval Reserve

Attained rank of Lieutenant in the U.S. Navy Inactive Ready Reserve

Honorably discharged in 2007

Attended U.S. Army Reserve Officer Training Corps Basic Training in Fort Knox, Kentucky, 1991

Trained and qualified in basic firearms, U.S. Army & U.S. Navy

SECURITY CLEARANCE

As U.S. military contractor, hold current Common Access Card (CAC) and prerequisite security clearance

Held and maintained all necessary clearances during U.S. Navy career

PROFESSIONAL MEMBERSHIPS

Member, Society of Naval Architects and Marine Engineers

Member, Marine Technological Society

OTHER

Member of Engineers Without Borders, Wisconsin Professionals Chapter

PADI and YMCA certified SCUBA diver

Amnesty International

REFERENCES

Available upon request