

## **CURRICULUM VITAE OF BRANSFORD PICKETT, PE**

### **SUMMARY OF EXPERTISE**

Expertise includes design and review of material handling equipment, material handling management, and ship board systems. The combination of field expertise, operations, engineering, and regulatory compliance provide clients with a complete accident investigation package of services. The depth and breadth of my expertise covers many successful design projects including commercial and military ships, many large complex material handling activities, testing requirements of shipboard system, and development and implementation of compliance programs.

Many of the major projects include first of a kind challenges: Exxon Valdez post-accident docking and structural repairs, commission testing of navy auxiliary ships' equipment including fueling systems, the US Navy Shughart Class Container Ship Conversion program, as well as shaft and appurtenance handling on the US Navy Watson Class ships. Included in these projects were planned engineered multi-crane lifts that reached in excess of 400 tons. These projects focused on safe, economic, simple designs compliant with applicable state and federal regulations, and national standards.

My expertise combined with a California Registered Professional Engineer's license allows me to bring a multi-dimensional approach to accident investigation and reconstruction, and engineering analysis to meet case requirements.

#### **COURT APPEARANCE:**

- Qualified as an expert witness in the State of New York Supreme Court
- Qualified as an expert witness in the State of California Supreme Court

#### **INVESTIGATIONS AND DEPOSITION APPEARANCES**

Has completed several investigations and depositions across several cases. Cranes include Container Cranes, Portal Cranes; Gantry Cranes, Mobile Hydraulic Cranes, Tower Cranes, Pedestal Cranes and Overhead Cranes to list a few. Investigations included inspection and maintenance duties; duties and responsibilities of owners, users, and operators; design and safety requirements; compliance to state and federal OSHA regulations, ILO, and national and international consensus standards.

Other accident investigations covered Aerial Devices, Dry Docks, Chain and Lever Hoists, slings, rigging hardware, forklifts, Below-The Hook devices, Cofferdams, Engineering Design Reviews, Pneumatic/Mechanical/Hydraulic Lifts, Jacks, NCCCO Crane Operator Training, Forklift Operator Training, Compliance to OSHA, ANSI, ASME and International Standards.

## EMPLOYMENT HISTORY

### Systems Engineering and Forensic Services

1996 - To Present

Chula Vista, CA

President

Technical Areas of Specialization: Provide consultation and litigation services on material handling and engineering nationally and internationally supporting of attorneys, insurance and end user companies. Services include accident investigation and reconstruction of equipment failures and personnel injuries, evaluation and review of equipment management, equipment operation, personnel training, as well as regulatory compliance. Engineering covers lift design evaluation, planning and review, naval architecture and marine engineering and project management.

#### Equipment and Compliance

Accident investigation and reconstruction services include equipment failure and personnel injury associated with the following list of equipment:

- Man baskets, Forklifts, Scissors Lifts, Aerial Lifts, Rigging Gear, Hydraulic Jacks, and Hydraulic/pneumatic Lift Systems (automotive lift systems), Conveyors, Pallet and Packages Conveyors, Pneumatic Systems, Machine tools, Boats, Barges, and Elevators.
- Tower, Mobile, Bridge, Truck, Portal, Container, Jib and Floating Barge Cranes, and Derricks
- Operator training compliance to National Commission for the Certification of Crane Operators, NCCCO, requirements for tower crane, mobile crane, overhead crane, articulating crane operator training and certification, signal person, and rigger certification.
- Compliance covers applicable national and international standards that include the ABS, ASTM, ASM, ASME, ANSI, WSTDA, ALI, SIA etc. and DIN, EN, FEM to list a few. National regulations include state and federal OSHA requirements as well as DOE, military specifications and standards.

Accident  
Investigation

#### Engineered Material Handling Design and Review

Services include single and multi-crane lift plans, material transport, and equipment testing. Design, review and analysis of supporting calculation of stresses imposed on lifting, supporting structure, and material handling equipment, and rigging gear. Equipment specification scope and review.

#### Naval Architecture & Marine Engineering

Perform intact, damage and probabilistic damage stability, and structural analysis on marine structures including barges, ships, and complimentary structures in accordance with regulatory bodies; ABS, Federal or State government.

Engineering

### Fairbanks Morse Engine

2008 – 2010

San Diego, Ca

Senior Manager

Managed Western Region Diesel Engine maintenance and repair services across 13 Western States, and Pacific Rim Countries including Japan, Singapore, South Korea, Philippines, and Guam. Employed 45-person team of service engineers, planners, and technicians. Diesel engine service covered following areas: Stationary Power Plants, Peaking Power plants, Commercial and Military ship installations and nuclear facilities.

- ✓ Improve year over year safety, health and environmental compliance targets for personnel and facility.
- ✓ Conducted weekly Cal-OSHA training across 12 areas of safety
- ✓ Conducted weekly technical training covering such areas as trouble shooting and root cause analysis
  - Implemented customer safety compliance, and product liability training for engineers

**National Steel and Shipbuilding Company**  
**San Diego, Ca**

**1984 to 2008**

**Initial Design and Naval Architecture Department**  
**Senior Supervisor Engineer**

**2005 – 2008**

Supervised ships functional design to include hydrodynamics, ship structure, hull resistance and powering, damage and intact stability, hull borne vibration analyses, and main and auxiliary machinery on both military and commercial ship contracts. Managed American Bureau of Shipping rules compliance and submittals. Lead customer product design review conferences on design validation on mission critical systems.

Lead the 13-person engineer team on activities that included ship conversion and repair. Responsibility included all ship docking for floating dry docks and graving docks, launches, inclinings, structural and vibration surveys, and UWILD programs.

Successfully completed the design of the United States Navy T-AKE Ammunition Auxiliary Dry Cargo Carrier, 14-ship program valued at \$6 billion. Lead the naval architecture contract support on the US Navy LPD 17, USS San Antonio west coast completion.

Successfully negotiated engineering partnering contracts with several international shipyards including Korea and Japan on a 9-ship commercial product tanker program.

**Maintenance Department**  
**Senior Reliability Engineer**

**2002 – 2005**

Responsible for 126-acre shipbuilding facility maintenance and reliability; equipment and distribution systems uptime performance, compliance, safety, equipment installation, life extension upgrades, repairs and maintenance.

Activities covered several shops:

- Failure analysis team of maintainers, management and end users
- Spare parts availability by partnering large regional and national suppliers.
- Fleet maintenance of all buses, trailers, straddle carriers, forklifts, cranes, trucks and cars

<b>Maintenance Equipment Type</b>		
Hydraulic Presses, 1000 tons	Pneumatic and Hydraulic Jacks	Air Piping
Metal Brake	Straddler Carriers	Water Piping
Rolls, 50 feet	Pipe Positioners	Electrical Systems
Forklifts	Pipe Benders	Numerically Controlled Machines
Cranes	Shears	Elevators
Conveyor	Transporters	People Movers
Hydraulic Lifts	Small Tools	Ways
Grit Blasters	Tail Gates	Floating Dry docks & launch Ways
Paint Booths	Buses	Graving Docks
Automotive Lifts	Cars	Electrical Transformers
Burning Machines	Trucks	High Speed Steel Edge Grinders
Fire Pumps	Trailers	High Capacity Blowers
Chain hoist	Gas Piping	High Capacity Extraction Fans

**Rigging and Transportation Department**  
**Production Engineer**

**1987-2002**

Responsibility span several key areas of operation; Equipment and personnel compliance to state, federal regulations and industry standards, engineering of multi-crane lifts, test jig and fixture design, structural and mechanical commissioning load test of shipboard and facility equipment, and accident investigation.

Developed a companywide material handling Compliance Program for equipment with lift capacities up to 800,000 pounds. Performed an equipment and personnel baseline audit by engineering companies, equipment manufactures, and consultants to generate key areas of deficiencies. The program instituted manufacturer and regulatory mandated daily and periodic inspections. The program covered in excess of 2000 pieces of equipment to include cranes, forklifts, trucks and hoists.

Developed, implemented and maintained Equipment Operator Training and Qualification Programs to satisfy all requirements of Federal OSHA, California OSHA and American National Standards B30 and B56 documents. Training programs covered crane operation, rigging skills and practices and industrial truck operation. Monitored compliance and performance of all programs to ensure adherence and quality. Directed independent periodic compliance audits

Performed structural and mechanical design for rigging tasks covering:

- o Multi crane lift for 400-ton ship structures
- o Test Rigs for US Navy Auxiliary ships including replenishment and fueling systems
- o Mooring systems test loads of 1 million pounds
- o Removal and installation of ship underwater appurtenances

Achieved the highest level rigging safety performance across the shipyard.

Achieved highly efficient shipboard structural and mechanical commission testing.

<b>Material Handling Compliance Program for Equipment and Personnel Details</b>	
<b>Item Count</b>	<b>Description</b>
4	100 ton Chain falls,
5	55-ton pneumatic chain falls, Lifting Gear,
2	400-ton Hydraulic 4Point Lifting System Jacks,
11	Mobile tower cranes, Portal Cranes
140	Overhead and jib cranes
15	Trailers
3	Truck Cranes,
5	Hydraulic Boom Lift Truck,
3	Fixed Tower Cranes
60	Industrial Fork Trucks
4	Hydraulic Cranes
7	Busses, Trucks and Lift Systems
45	Carts and Trailers
1	Full-function Rigging Fabrication and Hoist Repair and Test Facility
20	Spreader Bars with load charts
200	Pressure grip devices
400+	Hoists; Chain-Falls and Come-a-longs
100s	Wire rope and Synthetic Slings
1	Crane Operator Training Programs
1	Forklift Operator Training Program
1	Full Service Advance Rigger/ Signal Person Training Program
1	Rigging School Training Program
	Regulatory compliance includes Federal OSHA, California OSHA, US Coast Guard,
	Industry Standards Compliance Includes, ASME, ANSI, ASTM, ISO, ABS, WSTDA, ALI

## **Ships Management**

**1984 – 1987**

### **Project Manager**

Served as project manager for the construction and refurbishment of the ship's main propulsion machinery space, auxiliary machinery space, refrigeration plant, and oxygen producing plant on a state-of-the-art Naval hospital ships. Ensured project quality met all regulatory requirements, including those of the Coast Guard, America Bureau of Shipping, Public Health Service, other federal agencies.

## PRESENTATION AND TRAINING CLASSES CONDUCTED

- ✓ Confined Space
- ✓ Forklift, Industrial Powered Lifts Class and Practical Training
- ✓ Personal Protection Equipment
- ✓ Ergonomics
- ✓ Machining Guarding
- ✓ Confined Spaces
- ✓ Housekeeping
- ✓ Basic and Advance Rigging
- ✓ Respirator
- ✓ Hand and Power Tool
- ✓ Tower Crane Operator Training Qualification
- ✓ Portal Crane Operator Training Qualification
- ✓ Mobile Hydraulic Crane Operator Qualification
- ✓ Forklift, Industrial Powered Trucks Operator Qualification
- ✓ Basic Rigging for Shipyard Trades
- ✓ Advance Rigging for Journeyman
- ✓ Aerial Devices
- ✓ Practical Rigging for Shipyard Trades

## TRAINING AND DEVELOPMENT

- ✓ Cost Schedule Control Systems criteria  
National Steel and Shipbuilding, San Diego, CA
- ✓ Crosby Rigging Equipment Training, Risk and Compliance  
National Steel and Shipbuilding, San Diego, CA
- ✓ Shipyard Competent Person Course. Covered confined space safety, chemical exposure limits, inspection procedures and documentation requirements.  
National Steel and Shipbuilding, San Diego, CA
- ✓ Scaffolding Safety and Inspection Course. Covered the safety and regulatory requirements of scaffold structures as well as operational inspections.  
National Steel and Shipbuilding, San Diego, CA
- ✓ High Reach Equipment Inspection and Operation Course. Covered the pre-operation inspection and safe operating practices for equipment up to 126 feet in reach  
National Steel and Shipbuilding, San Diego, CA
- ✓ Fall Protection Course, training in inspection, and safe operating practices  
National Steel and Shipbuilding, San Diego, CA
- ✓ Hazard communication course, training in identifying, protection and handling hazardous materials.  
National Steel and Shipbuilding, San Diego, CA

- ✓ Safety, inspection and regulatory compliance of rigging hardware, and lift equipment.  
National Steel and Shipbuilding, San Diego, CA
- ✓ Crane and Rigging Training and Regulatory Compliance  
NACB, West, Las Vegas Nevada
- ✓ Legal Issues for California Professional Engineers; Practice of Professional Engineer  
Board Procedures, Professional Liability Insurance Law of Engineering Malpractice  
Halfmoon LLC, San Diego Ca
- ✓ Project Risk Management  
Project Management Institute, Denver, Colorado
- ✓ AREVA, Tribon Integrated Hull Design, Lines and Hydrodynamic Software  
National Steel and Shipbuilding, San Diego, CA
- ✓ New Managers Training Course  
American Management Associations, New York, NY
- ✓ Morrows Tower Crane Training,  
Morrows Salem Oregon
- ✓ Ship Production Technology  
National Steel and Shipbuilding, San Diego, CA
- ✓ Manufacturing Technology Tools Training  
National Steel and Shipbuilding, San Diego, CA

## MEMBERSHIP AND AFFILIATIONS

**Active member of SAE, NSPE, ASSE and ASME.**

**Involved with ASME B30 Safety Codes and Standards committee; sub-committees.**

✓ B30 Standards Main Committee for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings;  
alternate

- B30.1 – Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries
- B30.2 Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)
- B30.3 Construction Tower Cranes
- B30.4 Portal, Tower, and Pedestal Cranes
- B30.5 Mobile and Locomotive Cranes
- B30.6 Derricks
- B30.7 Base Mounted Drum Hoists
- B30.8 Floating Cranes and Floating Derricks
- B30.9 Slings
- B30.10 Hooks
- B30.11 Monorails and Underhung Cranes
- B30.12 Handling Loads Suspended From Rotorcraft

- B30.13 Storage/Retrieval (S/R) Machines and Associated Equipment
- B30.14 Side Boom Tractors
- B30.16 Overhead Hoists (Underhung)
- B30.17 Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)
- B30.18 Stacker Cranes (Top or Under Running Bridge, Multiple Girder With Top or Under Running Trolley Hoist)
- B30.19 Cableways
- B30.20 Below-the-Hook Lifting Devices
- B30.21 Manually Lever Operated Hoists
- B30.22 Articulating Boom Cranes
- B30.23 Personnel Lifting Systems
- B30.24 Container Cranes
- B30.25 Scrap and Material Handlers
- B30.26 Rigging Hardware<sup>1</sup>
- B30.27 Material Placement Systems<sup>1</sup>
- B30.28 Balance-Lifting Units

✓ P30 Planning for the Use of Cranes, Derricks, Hoists, Cableways, Aerial Devices Committee, member

✓ BTH Standards, Design of Below-the-Hook Lifting Devices Committee

#### **MEMBERSHIP**

- ✓ American Society of Mechanical Engineers, 9237314
- ✓ National Society of Professional Engineers, N00022233
- ✓ Society of Automotive Engineers, (SAE), 6122787603
- ✓ Project Management Institute, 360724
- ✓ American Society of Safety Engineers, 010047858
- ✓ National Academy of Forensic Engineers, 795M

## **EDUCATION AND LICENSURE**

#### **EDUCATION**

**MScBA**, Master of Science in Business Administration, Finance Risk  
SAN DIEGO STATE UNIVERSITY, San Diego, California

**BScE**, Bachelor of Science in Engineering  
Naval Architecture and Marine Engineer (Structural /Mechanical Engineering.)  
UNIVERSITY OF MICHIGAN, Ann Arbor, Michigan

**PE, Registered Professional Engineer**, License Number M29022  
STATE OF CALIFORNIA MECHANICAL ENGINEER

**DFE, Diplomate Forensic Engineer**, 795M, **NAFE Board Certified**  
The Council of Engineering and Scientific Specialty Board,

## AWARDS AND RECOGNITION

### **BP, Exxon Valdez**

Innovative design and installation of a highly effective rigging and material handling system.

### **USS Artic, AOE 8**

Successful completion of commission testing of Fuelling and Replenishment systems, shipboard material systems, and mooring systems.

### **NASSCO Team Building**

Team esteem High Ropes Challenge

### **San Diego Urban League**

Basic Educational Skills Tutorial Program

### **Toastmasters International**

Speech Craft Program in Communication and Leadership