Mark Marsalis
President and CEO (Chief Technical Consultant)

Mr. Marsalis has over 30 years of professional experience in the areas of science and engineering with degrees in both Applied Physics and Mathematics. He has extensive project management experience, accompanied with prototype development expertise in mechanical, control/instrumentation, electrical/electronic and civil engineering systems. The corporate structure of Marsalis Technologies Inc. allows Mr. Marsalis to fulfill his responsibilities as President and CEO while serving as Chief Technical Consultant.

Independent Consultant
Marsalis Technologies Inc.
Accomplishments
Perform design review of safety critical system i.e. High Integrity Pressure Protection Systems (HIPPS). Conducted hazard assessment/analyses (i.e. Hazard Operability Analysis (HAZOP), Hazard Identification Study (HAZID), Layer Of Protection Analysis (LOPA), Safety Integrity Level (SIL). Perform Data Analysis, Engineering Product Development (i.e. FEED, FEA, CFD, FTA, RCA, SPOF, FMEA, FMEDA, and DOE).

Subsea Systems, Pipeline, and Hardware Engineering Mgr.
McDermott International Inc.
Accomplishments
Responsible for regional engineering support, procurement, testing and commissioning of subsea systems and hardware. Global Engineering Standards Team member responsible for Atlantic Region input and coordination. Subject Matter Expert (SME) for subsea technology research and development in the area of instrumentation and controls. Managed a team of 12 engineers within the technical discipline areas of subsea structures, pipelines, controls/umbilical, installation and commissioning.

Principal Advisor for Subsea Control Systems
Wood Group Kenny
Accomplishments
Americas Region Technical Authority Subject Matter Expert (TASME) for High Integrity Pressure Protection Systems (HIPPS) technology development and implementation. Project management of onshore and offshore projects for Oil and Gas Operating Companies. Technical engineering support for the BP Exploration & Production Inc. Western Hemisphere Global Subsea Hardware Group. Responsible for the Subsea controls system and structures technology benchmarking support as it relates to existing and frontier equipment purchase costing. Developed a benchmark matrix for existing and frontier equipment purchase costing. Developed the Vessel Fluid Transfer System Function Design Specification (FDS); and System Failure Mode, Effects and Criticality Analysis (FMECA) report with DNV for the BP Exploration & Production Inc. Technical support and project management for the Helix Energy Solutions Group Topside MCS software upgrades on the Gulf of Mexico (GOM) Boris Field Floating Production Storage and Offloading (FPSO) Helix Produce 1. Responsible for monitoring of Master Control Station (MCS) software upgrades, repairs and testing. Developed the Subsea Control Systems technical manufacturing, testing and product design audit report; and Subsea Control Module (SCM) product line equipment design and reliability assessment Report for the Anadarko Petroleum Corporation. Technical support and project management for the Noble Energy Corporation Gulf of Mexico (GOM) Raton South Field Subsea High Integrity Pressure Protection Systems (HIPPS) engineering proposal. Responsible for the HIPPS design engineering review with vendors. Developed the High Integrity Pressure Protection Systems (HIPPS) Function Design Specification (FDS); and High Integrity Pressure Protection Systems (HIPPS) Front End Engineering Design (FEED) study assessment.

Project Engineer
Dril-Quip
Accomplishments
Perform subsea tie-back project management (Production Control System (PCS), Master Control System (MCS), Emergency Shut Down (ESD), High Integrity Pressure Protection Systems (HIPPS), Human Machine Interface (HMI), Topside Umbilical Termination Unit (TUTU), Tree, Subsea Control Module (SCM) (Tree and HIPPS), Manifold, and Umbilical). Managed HIPPS product prototype, manufacturing, and testing. Conduct the Safety Integrity Level three (SIL 3) certification approval program with governing agencies.
Development of the following:
- HIPPS (High Integrity Pressure Protection Systems) design criteria
- Programmable Logic Controller (PLC) control-based HIPPS product line
- Solid state control based HIPPS product line
- HIPPS Factory Acceptance Testing (FAT) procedures
- HIPPS Site Integration Test (SIT) procedures
- HIPPS commission and decommission procedures

Sr. Mechanical Engineer
Stewart & Stevenson
Accomplishments
Designed generator product support cooling systems and factory acceptance testing documentation. Redesigned diesel cooling support system and piping for the above engine/generator units, as well as redesigned the piping component bracket support system. Produce new factory acceptance test procedure documentation for engine/generator units. Supervised factory acceptance testing for the generator and diesel engine unit components.

Project Engineer
Weatherford International Ltd.
Accomplishments
Manage Horizontal Pumping System (HPS) product prototype, manufacturing, and testing engineering group. Provide engineering technical support for HPS manufacturing and design for the following business groups: Midland, TX; Houston, TX; Edmonton, Canada; Dubai, UAE, and Shanghai, China. Developed Modular HPS unit product line for low flow applications. Developed Horizontal Surface Pump Test Bench (HSPTB), design test bench for pump flow and pressure testing, Created Pump Skid Design Software Program.

Design Engineer
BJ Services Company
OSCA Inc. (Acquired by BJ Services Company May 2002)
Accomplishments
Developed contract specification and assembly manuals for downnhole tool product lines.
Provided services as an ANSYS FEA Specialist.
Development of the following:
- Acid Back Check Valve product line.
- Recloseable Pressure Activated Circulating Valve product line.
- Recloseable Radial Pressure Activated Valve product line.
- Isolation Back Check Valve product line for contain well fluids under pressure.
- Recloseable Annulus Pressure Activated Circulating Valve product line.
- Recloseable Pressure Actuated Circulation Valve product line.

Inspector
ESPA Corp.
Accomplishments
Performed construction project inspection (civil, mechanical, and electrical). Developed of project completion schedules.

Principal Inspector/Project Manager
Detroit Water and Sewerage Dept. (Field Engineering Division)
Accomplishments
Manage quality control inspectors and contractors. Conducted engineering system design review. Developed project completion schedules. Perform construction project estimation, project proposals, and project cost impact studies. Developed asbestos abatement procedures. Developed of water main utility installation procedures. Conducted civil, mechanical, and electrical system, quality control inspections, and testing.

Designer/Draftsmen
Tucker, Young, Jackson, Tull, Inc.
Accomplishments
Developed civil, mechanical, and electrical system drawings. Field assignment, soil and concrete analyses/testing

Duties and Responsibilities
President and CEO
Chief Technical Consultant

Education
B.S. Applied Physics
Wayne State University, 1997
B.S. Mathematics
Wayne State University, 1997

Certifications
Certified Functional Safety Engineer
TÜV Rheinland

Associations and Interests
American Mathematical Society (AMS)
American National Standards Institute (ANSI)
American Physical Society (APS)
American Society of Mechanical Engineers (ASME)
American Society of Safety Engineers (ASSE)
American Society of Testing and Materials (ASTM)
American Welding Society (AWS)
National Agency for Finite Element Methods and Standards (NAFEMS)

Committee Participation
API 17-O
Committee for High Integrity Pressure Protection Systems (HIPPS) Specification
API 17-F
Specification for Subsea Production Control Systems

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