

Dr.NAGESH BHADRIRAJU

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A. EXPERIENCE SUMMARY:

Doctorate Degree (Ph.D.) in Naval Architecture, Masters' Degree (M.Tech.) in Naval Architecture and Graduate (B.Tech) in Mechanical-Marine Engineering, and having **24+ years** of experience in Quality oriented FSO & FPSO & ship Designs and Offshore Structural & piping designs, Construction Supervision etc., assimilating changes in technology and customer requirements. Excellent Skills in Riser Analysis, Pipe Stress Analysis and Pipe Surge Analysis using PIPENET and CAESAR-II, AUTOPIPE and SHIP Constructor-2014, FORAN 3D piping Design Software. Experience includes Executive Management and Business Development. I have Work experience in various countries such as **USA, SINGAPORE, MALAYSIA, INDONESIA & HOLLAND.**

B. SKILL SET :

- (i) A good ship & offshore machinery & piping design engineer & Structural Designs of all shipboard machinery, HVAC and Piping design; construction supervision ensuring specification compliance; good estimator of overall cost of vessels and material coordination during construction.
- (ii) Acquaintance with Class Rules of ABS, API, LRS, IRS, BV & DNV MARPOL, SOLAS & Standards like ASTM, JIS, ASHRAE & NFPA standards in the Design of Passenger ships, Chemical Tankers, Offshore Supply Vessels & Conversions jobs of Gas Tankers to Gas **FSOs & FPSOs.**
- (iii) Ability to understand and analyze business needs, Client Management and ability to manage multiple projects.

C. EDUCATIONAL QUALIFICATIONS:

DOCTORATE DEGREE (Ph.D.) in NAVAL ARCHITECTURE

- (i) **Ph.D. in Naval Architecture.** Mine is a First Doctorate Degree in Naval Architecture, from Andhra University College of Engineering.
- (ii) **M.Tech (Naval Architecture),** A.U. College of Engineering. (Passed in **First Class with Distinction**) – **CGPA – 9.5** (Highest in the University)
- (iii) **Bachelor's Degree in Mechanical -Marine Engineering .** Passed in **First Class with Distinction.** From Andhra University College of Engineering in August, 1995.

D. WORK EXPERIENCE: (21+ Years in the following Organizations).

- (i) Presently **VICE PRESIDENT (DESIGNS)** in **ABG Shipyard Limited** (May-2015 to Till date)
- (ii) As a **General Manager (Design & Process Engineering)** in Pipavav Defence & Offshore Engineering Company Limited, Gujarat. Apr-2014 to May-2015.
- (iii) As a **DIRECTOR (Technical & International Operations)**, From Apr,2007 – Apr-2014 (TAI, New Orleans, LA,USA). **Worked both in USA** & and Indian Branch Offices of this Company.
- (iv) As a **Project Manager (Mech.& Piping)**, From Sep, 2005 – Mar,2007
In **Tero-marine, Singapore Pte Ltd Worked in SINGAPORE**
- (v) As a Manager (Designs), From May, 2002 - Sep, 2005 (NSDRC)
From Aug 1995 to May 2002 worked in NSDRC in different positions.

E. CAD/CAM SHIP DESIGN SOFTWARE EXPOSURE:

Machinery & Piping Design Packages: SHIP CONSTRUCTOR, RHINO & FORAN
Piping Analysis Softwares : CADWorx-2007, CAESAR-II, PIPENET.
FEM Softwares : ANSYS-12, NISA, STAADPro

F. JOB PROFILE (in various organizations)

(I) JOB PROFILE IN ABG Shipyard Limited: (From MAY-2015 to PRESENT)

As a **Vice President (Design)**, I am the Overall in-charge of complete Design & Process Engineering and Head of the Design Division for the entire ABG Shipyard. I am the head of the design division for the entire shipyard which has three shipyards, one in Dahej area, second one in Surat & third one in Western India Shipyard in Goa.

I am design head taking care of the basic design, classification design and production drawings of all the vessels of the shipyard which includes, 20,000T DWT Cement Carrier, MPSVs, Diving Support Vessel (DSV) for ONGC, Well Stimulation Vessel (WSV), Siesmic Research Vessel, Cadet Training Ship (CTS) for Indian Navy, Pollution Control Vessel (PCV) for Indian Coast Guard and Construction of four numbers of new Drill RIGS (F&G's JU2000A) for Essar Shipping Company.

(II) JOB PROFILE IN PIPAVAV SHIPYARD: (From APR-2014 to APR-2015)

GM (D & PE): As a **GENERAL MANAGER (Design & Process Engineering)** I was the Overall in-charge & Head Design Department. I was sole in -charge of complete Design & Process Engineering Package for conversion of two ONGC RIGS "SAGAR LAXMI" & "SAGAR PRAGATI" for conversion of these existing rigs into process plants like MOPU (Mobile Offshore Production Units), leading a team of about 120 which comprises of in-house design team and outside consulting design houses of the shipyard such as NAUVATA, KAVIN Engg, CYBERMARINE & L&T Valdel. Ensuring that all international codes, API standards, process piping standards and manufacturing & production standards are met for all equipment, fittings and construction being done on these two vessels and including 12 Nos. of ONGC Offshore Supply Vessels.

**(III) JOB PROFILE IN Technology Associates, Inc. New Orleans, Louisiana, USA.
& TECHNOLOGY ASSOCIATES, INDIA – VISAKHAPATNAM, INDIA.
(From APR-2007 to APR-2014)**

As a **DIRECTOR (Tech. & International Operations)**, in Technology Associates Inc. , New Orleans, Louisiana, USA, I was Responsible for the complete execution and management of all the Projects of the company and as an overall in charge and Project Manager in the following design projects. Supervising and providing technical direction to all disciplines of engineers (mechanical engineers, structural engineers, naval architects and electrical engineers).

- (a) RISER Analysis for Drill Ships & Drill Rigs using API 16Q, Conversion Jobs of FSOs & FPSOs, Designs for New Tanker Jetties and associated pipe lines etc.**
- (b) OSV's: Basic & Classification Designs of (i) 294' Ice Class Oil Recovery Vessel for SHELL OFFSHORE Inc. and (ii) 295' Offshore Supply Vessel & Methanol carrier for HARVEY GULF INTERNATIONAL MARINE, USA.
- (c) DREDGER: Retrofitment for re-powering of DREDGE B.E. Lingdholm of M/s. WEEKS MARINE, INC., USA.
- (d) PLEASURE YACHT: Complete Production Design of a 141' Aluminum Pleasure Yacht for M/s. TRINITY YACHTS, USA.
- (e) OSRV: Basic Design of a Polar Class, 300' Oil Spill Response Vessel, for HARVEY GULF INTERNATIONAL MARINE, USA.

**(IV) JOB PROFILE IN TERO MARINE (SINGAPORE) Pte Ltd.
(From SEP-2005 to MAR-2007)**

Preparation of equipment arrangement, piping plans, piping isometrics, pipe support locations, pipe stress & surge analysis with a sound techno-commercial knowledge, using SHIP CONSTRUCTOR, RHINO, CADWORX, CAESAR-II & PIPENET. And Construction Supervision of the Ships being built in ST MARINE & other various shipyards as owner's representative.

Practical experience in the design and construction of FPSOs, FSOs, Drill Rigs and Semi Submersibles, Aframax size chemical tankers and Gas Carriers. Experience in Finite Element Analysis using StadPro. Extensive knowledge of API, ASME, Class regulations and other oil & gas industry codes and standards

- (a) CONVERSION OF GAS CARRIER to GAS FSO** : Project Manager for our scope of work in Conversion of a BV Classed, Gas Carrier (GAS CONCORD) to GAS FSO (BELANEK) for CONOCO PHILIPS, USA . – Preparation of Piping isometric drawings for LPG cargo deck piping layouts, and piping systems for newly added generators and refrigeration skids on the deck . (Under Sub-contract to COMPASS ENERGY, SINGAPORE).
- (b) TANKER TERMINAL PIPELINES** : VOPAK Terminals SINGAPORE Pte Ltd, Pipeline arrangements for product lines and utility lines, fire system arrangements for the Construction of three New Tanker Jetties in their terminals. Pipe Surge analysis, Water hammer analysis & Pipe Stress/time history analysis.

- (c) **AHTS:** Complete Design of DNV Classed 68m AHTS for Keppel Shipyard, Singapore.
- (d) **CHEMICAL TANKER:** Basic Design of LRS Classed, Ice Class Chemical Tankers (Aframax size) for Labroy Marine, Singapore.

(V) JOB PROFILE IN NSDRC (National Ship Design & Research Centre). VISAKHAPATNAM, INDIA. (From AUG-1995 to SEP-2005)

As a **MANAGER (Designs)** and in Various Positions, I was responsible for all engineering calculations and setting specifications for Pumps, BOPs, Compressors, Heat Exchangers, Pressure Vessels, HVAC, Bulk Solids Conveying Systems, Valves, Choke & Kill Manifold, Seal Systems, Ancillary Systems. Design and implementation of piping hydraulic systems.

- (a) **DRILL SHIP:** Active Project Member in Enhancement of Drilling Depth of ONGC Drill ship, Sagar Vijay by 600 m. Activity done : Riser Analysis, Buoyancy modules for the risers, BOP modifications.
- (b) **DRILL RIG:** Piping modification of Drill Rig Noble 'Ed-holt'. Activity: LP & HP mud piping modifications, additional mud pits, sea water and drill water supply piping arrangement for additional mud pits, additional shale shakers, mud trough arrangement, trip tank and associated piping arrangement, leg removal jet water piping arrangement.
- (c) **WATER INJECTION DREDGER :** Project Manager for 'Design & Construction Supervision of 2 Nos. Hydraulic Surface Dredgers' (Water Injection type of Dredgers, which is a low cost dredging method) designed for the first time in India. Repowering and retrofitting of Dredgers for Week's Marine Inc, USA.
- (d) **PASSENGER VESSEL:** Project Manager for Design & Construction supervision of 400 Passenger Vessel – M.V. Kalighat – at Hooghly Dock & Port Engineers for the entire period of construction.
- (e) **Other Vessels:** Project Member in (Basic Design & Classifications Designs of (i) 4500 m³ Trailing Suction Hopper Dredger for DCI, (ii) 2500 m³/hr capacity Cutter Suction Dredger, Workboat & Accom. boat (Dredging unit) for IWAI, (iii) Basic/Classification Design of 100 -Passenger Vessels for A&N Administration. (iv) Basic Design of 500 Passenger Vessel for A&N Administration, & (v) Basic/Classification Design of Despatch Vessel for Calcutta Port Trust

G. TECHNICAL PAPERS PRESENTED AND PUBLISHED IN NATIONAL & INTERNATIONAL JOURNALS

- 1) **“STUDY ON THE FAILURES OF LEG LATTICE STRUCTURE WHEN OFFSHORE DRILL RIGS ARE BEING CONVERTED FROM MOBILE OFFSHORE DRILLING UNITS (MODU) TO MOBILE OFFSHORE PRODUCTION UNITS (MOPU).”** This paper has been published in the International Journal of Innovative Research and Development (IJIRD), Vol -5, Issue-7 (August-2016). ISSN:2278-0211(online), pp 198-210 in the Aug-2016 issue.
- 2) **“AN INVESTIGATION INTO THE FAILURE OF LEG -LATTICE STRUCTURE OF A JACK -UP RIG IN RELATION TO SITE SPECIFIC CONDITION, USING FINITE ELEMENT METHOD, WHEN ELEVATED LOAD OF THE RIG HAS BEEN INCREASED”.** This paper has been published in the Imperial Journal of Interdisciplinary Research (IJIR), Vol -2, Issue-9 (September-2016). ISSN:2454-1362, pp 1232-1239 (September-2016 journal).
- 3) **“AN INVESTIGATION INTO THE FAILURE OF PINION HOLDING CAPACITY, JOINT CANS OF A LEG STRUCTURE, AND PRELOAD TANK CAPACITY OF A JACK-UP RIG BY USING FINITE ELEMENT METHOD”.** This paper has been published in the International Journal of Science & Technology (IJST), Vol-4, Issue-8 (August-2016). ISSN:2321-919X , pp 17-25 (August-2016 journal).
- 4) **“INVESTIGATION ON THE OVERTURNING STABILITY OF A JACK UP MOBILE OFFSHORE PRODUCTION UNIT BY SITE -SPECIFIC ANALYSIS TO FIND A SOLUTION TO AVOID THE FAILURE OF ITS LEG LATTICE STRUCTURE”.** This paper has been published in the Imperial Journal of Interdisciplinary Research (IJIR), Vol-2, Issue-10 (October-2016). ISSN:2454-1362, pp.1232-1239 (October-2016 journal)
- 5) **“PROCEDURE FOR FATIGUE ANALYSIS AND JOINT CAN HOT SPOT ANALYSIS OF THE LEGS OF A JACK UP RIG USING FE ANALYSIS”.** This paper has been submitted to Athens Journal of Science & Technology. Paper is through in first peer review. Second Peer Review is going on. Will be published in October-2017 issue.
- 6) **“SITE-SPECIFIC ASSESSMENT ANALYSIS OF A JACK UP MOBILE OFFSHORE PRODUCTION UNIT AS AN INVESTIGATION ON THE FAILURE OF ITS LEG LATTICE STRUCTURE”.** This paper has been selected for participation in the 27th Annual International Ocean and Polar Engineering Conference San Francisco, California, USA, June 25-30, 2017 (The paper will be published in the International Journal of Offshore and Polar Engineering as a proceedings of the conference named ISOPE-2017: International Arctic 2017 Symposium, that will be published in December-2017).
- 7) **“DESIGN OF QUADRAMARAN VESSEL”** - Presented in an International Conference conducted by Indian Maritime University and published in the International Journal of Innovative Research & Development (Held in Dec 2012).
- 8) **“LATEST TRENDS IN REDUCTION OF CARBON FOOT PRINT AND GREEN HOUSE GASES FROM SHIPS”** Presented and Published in the Marine Engineers Review (India), A journal of the Institute of Marine Engineers (India), November - 2013, Volume-7, Issue-12: ISSN: 2250 – 1967.

- 9) **“TECHNOLOGY ENVIROMAX 300 DEEPWATER OSV ”** - Presented in an International Conference conducted by Indian Maritime University and published in the International Journal of Innovative Research & Development (Held in Dec-2012).
- 10) **“LATEST TRENDS IN STRUCTURAL DESIGN OF SHIPS”** – Presented & Published in a National Workshop on Ship, Offshore & Port Structures, conducted by Andhra University, Visakhapatnam. (Held in March- 2011).
- 11) **“MARINE OFFSHORE STRUCTURES-ELEMENTS TO BE CONSIDERED WHILE CONVERTING THE DRILLING RIGS FROM MODU TO MOPU ”** Presented and Published in the Marine Engineers Review (India), A journal of the Institute of Marine Engineers (India), September 2017, Volume 11, Issue-10: ISSN: 2250 – 1967.
- 12) **“QUADRAMARAN VESSEL – A NOVEL DESIGN IN MULTI -HULL VESSELS”** Presented in International Seminar GLOMARS-2015 and Published in the Marine Engineers Review (India), A journal of the Institute of Marine Engineers (India), November-2015, ISSN: 2250 – 1967.
- 13) **“A MINIATURE WORKING MODEL OF OCEAN THERMAL ENERGY CONVERSION (OTEC)”** - Presented in an International Conference conducted by Indian Maritime University and published in the International Journal of Innovative Research & Development (Held in December 2012).

H. PERSONAL INFORMATION:

Date of Birth & Age	:	14 th June 1972 (45 years)
Marital Status	:	Married & I have two daughters.
Cross Cultural Sensitiveness	:	Good
Working Capability with group	:	Good
Passport No.	:	L- 8670604 (Valid up to; April-2024)
Language Abilities	:	Fluent in ENGLISH
Other foreign Languages known	:	Russian Language (R,W)

REFERENCES:

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| (i) | Prof.I. Niranjan Kumar
Head of the Department
Department of Marine Engineering. | (ii) | Sri U.S. Ramesh
Director
Indian Maritime University |
| (iii) | Shri Venu Avadhanula
Vice President (Commercial)
Abu Dhabi Ship Building (ADSB), Abu Dhabi. | | |

More References will be provided upon request.

Place: Mumbai

Yours faithfully

Date: 14th November 2017

(Bh. Nagesh)