

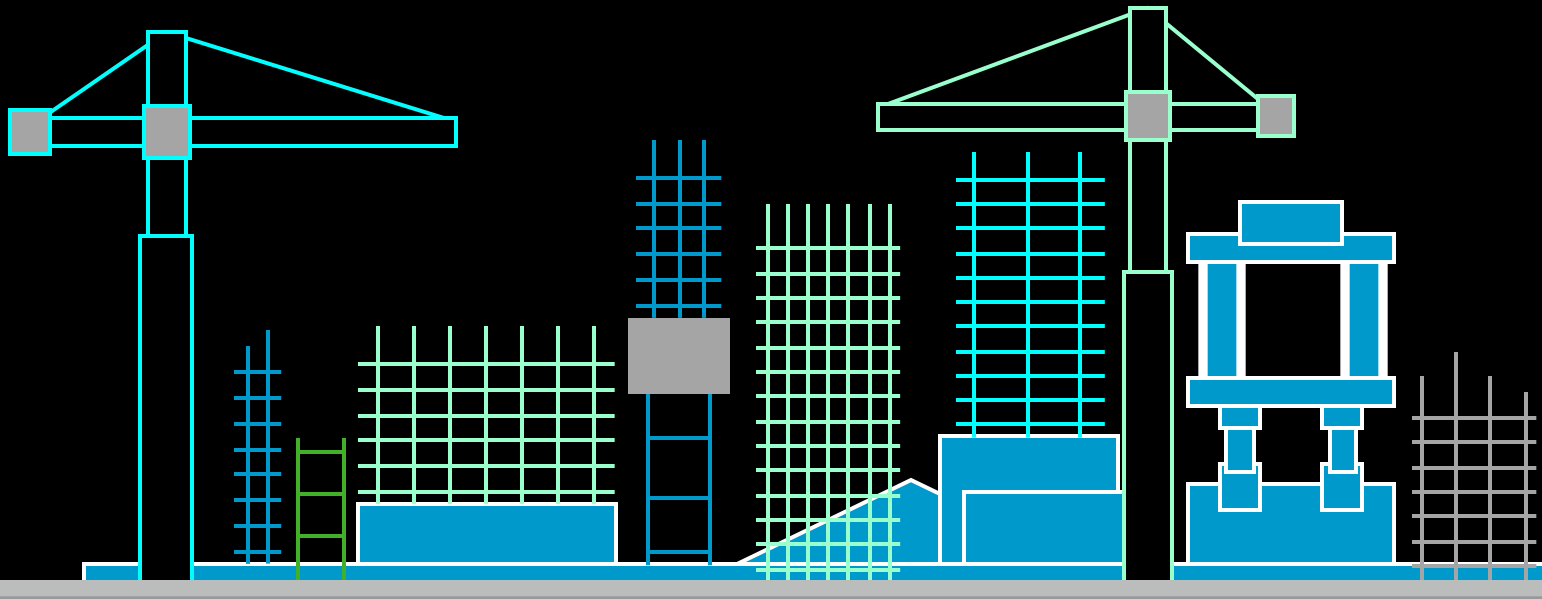


**2knots**

## Dry Docking Support Services

# Get to Know Us

We are a design, engineering & consulting firm providing services to the global maritime and oil & gas industries. Our specific services include *Naval Architecture, Marine Engineering, Conversions & Retrofit Engineering, Docking & On-Site Supervision Support* globally.



## Operations

Since 2013, we have been operating across the globe offering multi-disciplinary engineering solutions

## Classification Societies

Worked with all major Classification Societies: Class NK, RINA, DNV-GL, IRS, ABS, LR, BV

## Security Compliance

Strict IT Compliance and Data Security In-Place

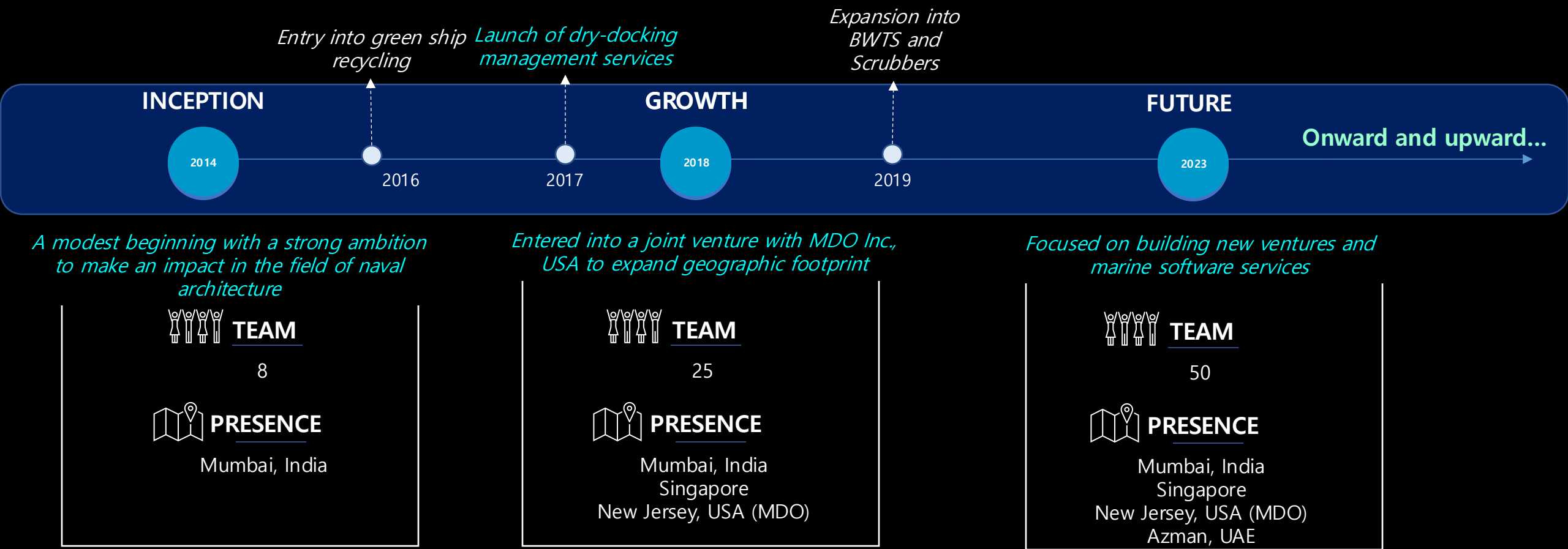
## Certifications

ISO9001:2015

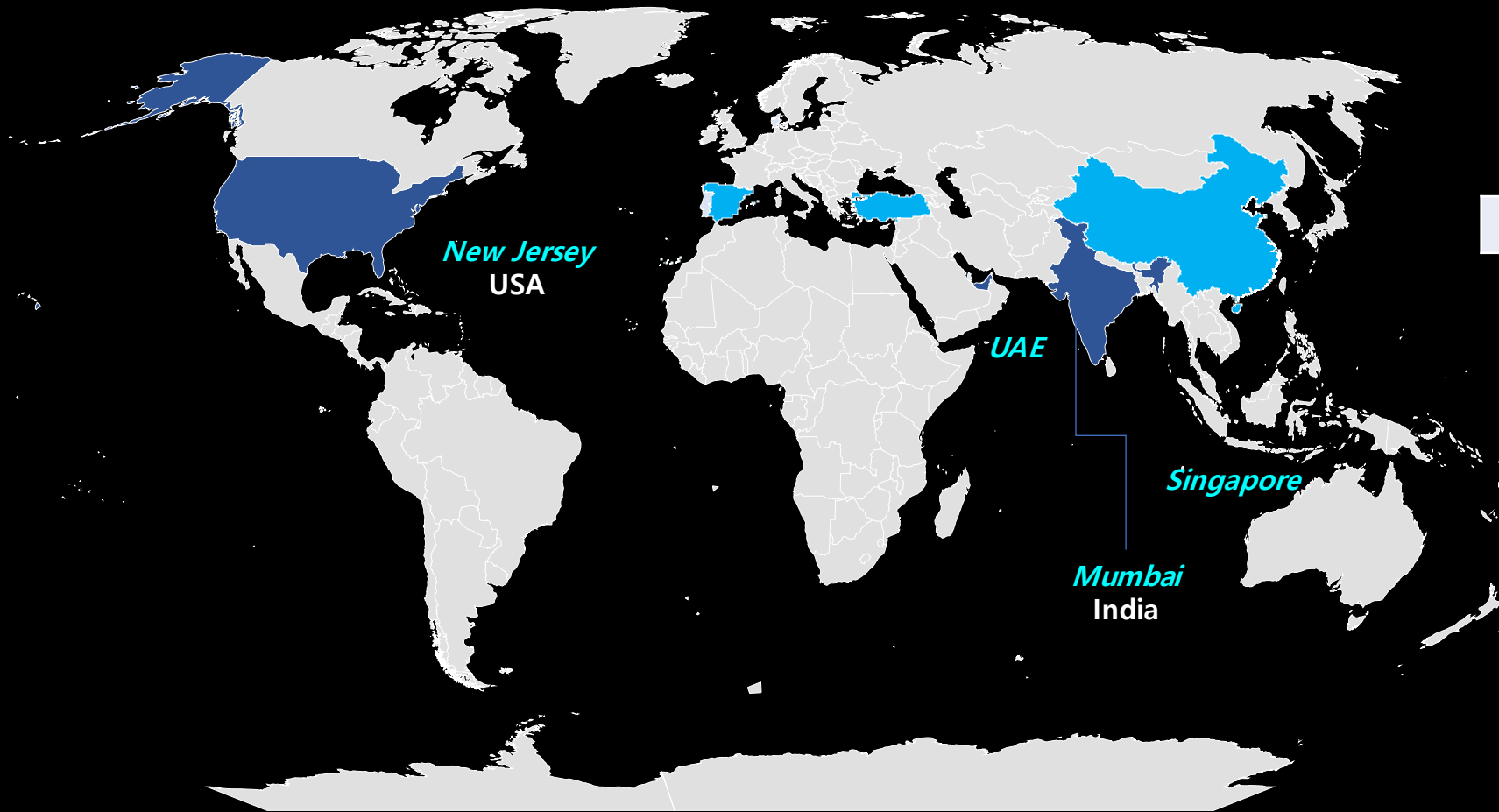
# Our Values



# Our Journey So Far



# Our Presence



## Our Locations

Mumbai, India – HQ

Singapore

UAE

New Jersey

## Our Operations

Our projects span across USA, Europe, the Middle East, South East Asia

*We leverage an ideal combination of our India based core team and our local specialists to cater to ports across the globe*



# Our Services



**ENGINEERING**



**MARINE SITE  
INSPECTIONS & SURVEYS**



**TURNKEY SOLUTIONS**

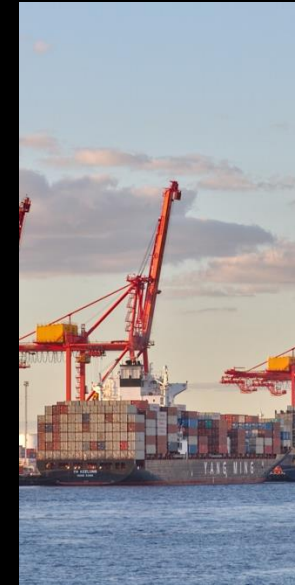


**GREEN  
SHIPPING**



**SOFTWARE  
SOLUTIONS**

# Our Services



## SHIP DESIGN AND OIL & GAS ENGINEERING

- Concept Design, Basic Design & Production Engineering
- Retrofit & Conversion Engineering
- Naval Architecture, Structure, Piping, Electrical, Mechanical & Instrumentation



# Our Services



## MARINE INSPECTION SURVEYS & SITE SERVICES

- Owner's Representative for New Construction, Retrofits and Upgrades
- Docking Planning and Management, On-Site Supervision and Quality Control
- UTM - UT Gauging, CAP & CAS Service, Pre-Docking Survey for Steel Estimation, 3D Scanning
- Damage Assessment Surveys and Pre-Purchase Inspections





# Our Services



**TURNKEY SOLUTIONS** Engineering, Installation and Project Management services for New Construction, Retrofits and Upgrades



# Our Services



## SUSTAINABILITY CONSULTING

- IMO HKC Compliance , IHM Surveys in ship breaking and supervision for demolition
- EEXI, CII and Sustainability Advisory
- Technical Consulting, Commercial Feasibility and ROI, Vendor Management



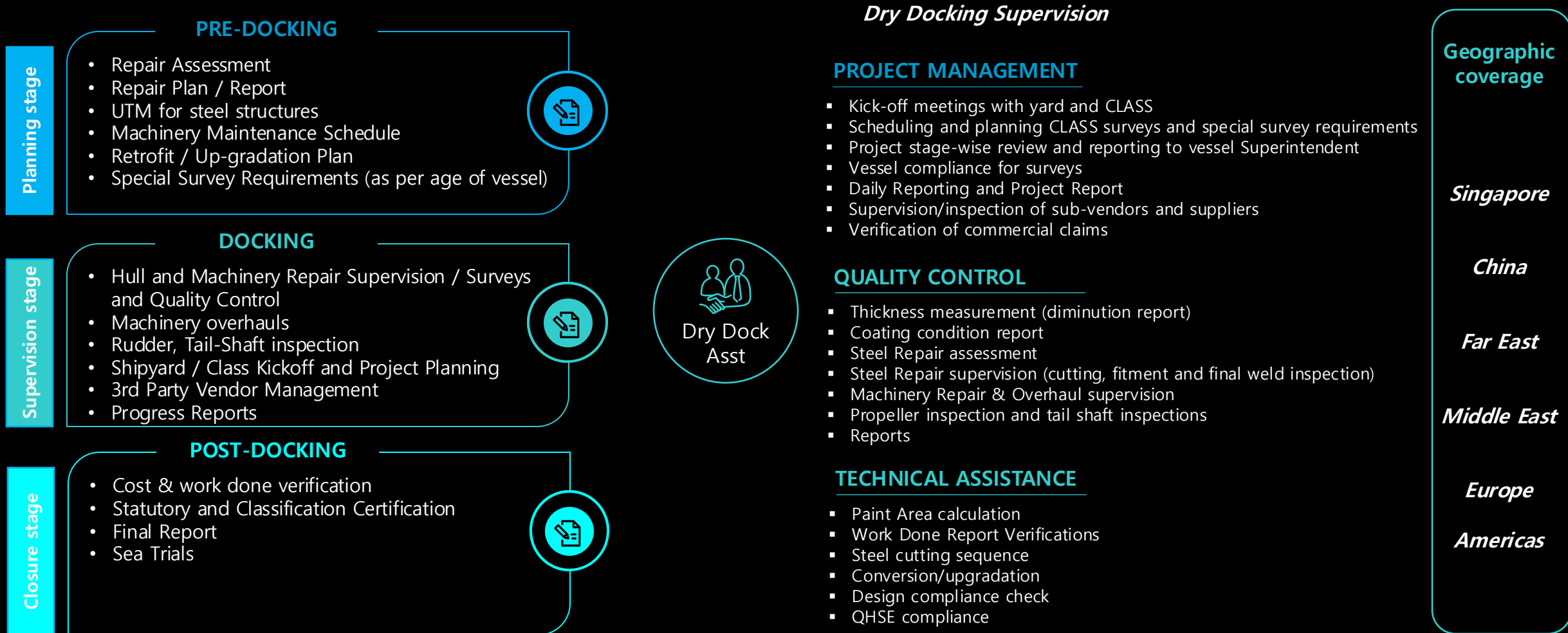
# Our Services



## SOFTWARE SOLUTIONS

- Battle Damage Control System for Naval Vessels
- Ship Loaders for Commercial Vessels
- CII & Performance Management Platform

# Dry Docking Management Services





# Value Addition



## QUALITY

- Experienced Team
- Domain Specialists
- Inspection & Quality Management Systems
- Ad-hoc Support from Design Team

## PROCESS

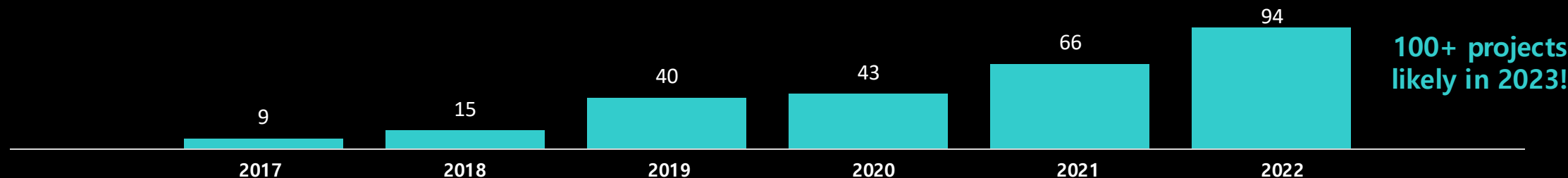
- Process Standardisation
- Project Management
- Analytics & Key Metrics
- Feedback Mechanisms
- Quarterly Reviews

## COST

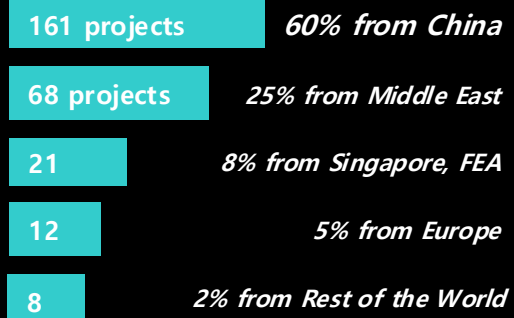
- Quantity Control and Management
- Cost Tracking and Control Sheets
- Yard / 3<sup>rd</sup> Party negotiation supports
- Service Reliability

# Our Experience: Ship Dry Docking

More than **300+ projects** supported in last 6 years covering Containers, Tankers, Bulk Carriers, Tugs



## VOLUME by REGION



## VOLUME by SHIP TYPE



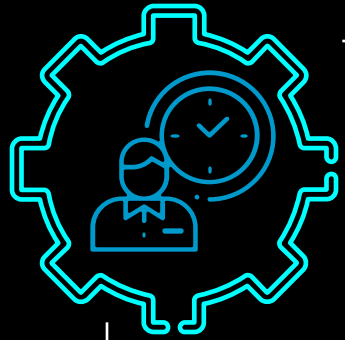
## Our clientele

Maersk  
Maersk Tankers  
Eagle Bulk  
Synergy  
Zeaborn  
Pasha Hawaii  
Matson  
Sealand  
Svitzer



# We support our valuable clients by investing in assets

## CLIENTS



## SOFTWARE



# Our Team

## Team 21 Knots

*Our team of naval architects and engineers have experience in Design Houses, Shipyards, Sea Service and Classification Societies. This directly translates to high quality and highly specific deliverables.*

- 21 Knots Docking Team has total team size of 25 with local teams in China, Singapore, India, Middle East and Europe.*
- Our docking team is a mix of Naval Architect, Marine Engineers, Ship Building / Repair Managers with minimum experience of 10 years with an average experience of 15+ dockings for each member.*

|                  |                      |                                |                  |           |                           |                                  |                 |
|------------------|----------------------|--------------------------------|------------------|-----------|---------------------------|----------------------------------|-----------------|
| Naval Architects | Structural Engineers | Machinery and Piping Engineers | Site Supervisors | Surveyors | Draftsmen and 3D Modelers | Master Mariners/ Chief Engineers | UTM Technicians |
|------------------|----------------------|--------------------------------|------------------|-----------|---------------------------|----------------------------------|-----------------|



# Meet Our Team



Team 21 Knots

## NITESH RANVAH

*Founder and CEO*

*Nitesh began 21 Knots Design and Consulting in 2013 with a modest beginning to make a difference in the world of marine design and solutioning. Leveraging his 15 years of industry experience in the areas of survey & design, dry-docking, ship building and offshore consulting, he has established himself as an expert Naval Architect. Developing sustainable solutions for the shipping industry with respect to climate change was and continues to be his passion.*

# Meet Our Team

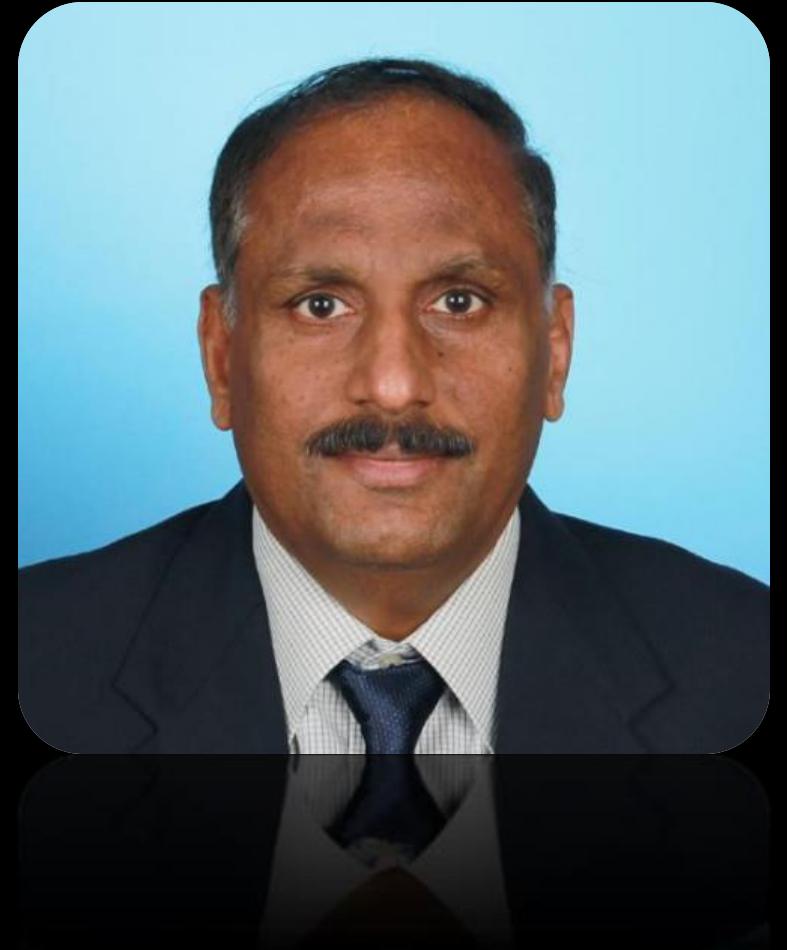
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Team 21 Knots ●————

## SOJAN VARKEY

*Senior Naval Architect, Regional Manager - Singapore*

*25+ Years experienced Naval Architect with working exposure with biggest shipyards in Singapore, Indonesia and India. Experienced in design, project management, newbuilds and repairs supervisions*



# Meet Our Team

| Sr. No | Name         | Qualification  | Years of experience | Experience   | Designation            |
|--------|--------------|--|---------------------|--|------------------------|
| 1      | Sojan Varkey | M Sc in Marine Technology – University of Newcastle upon Tyne – [2007] & B Tech- Naval Architecture & Shipbuilding | 37                  | Experienced Naval Architect working as Technical Head and Engineering Manager with a demonstrated history of working in the Marine, Oil & Energy industry including but not limited to Marine and Offshore Structure designs, retrofits, installations, Supervisions and docking superintendent  | Docking Superintendent |
| 2      | Pungav Verma | BE Mechanical; Chief Engineer - MEO Class 1 (Motor) certificate  | 28                  | A competent Marine Engineer having a background of over 28 years in the shipping industry including Ship surveyor and Marine Management Systems auditor with Indian Register of shipping and ABS Group. Experience in New Ship building, ship repair, Machinery repairs, Damage Surveys, Pre-purchase Condition Surveys, Damage Surveys, Dry dockings, Testing and Trials, Bollard Pull certification, Technical Services for New Construction, Ship Structure Condition Assessment, Vibration Analysis. | Docking Superintendent |
| 3      | David Zou    | Bachelors Degree; Surveyor, ISM/ISPS/MLC auditor   | 23                  | Worked as Ship superintendent for Oil & Chemical tanker/bulk carrier/container ship/LNG dry docking repair on behalf of shipowner/manager. 15 years of surveyor experience related to ship in operation & newbuilding for various kind of vessels (oil/chemical tanker, LPG, LNG, container ship, bulk carrier, cement carrier Ro-ro vessel etc.as well as ISM/ISPS/MLC auditor. Rich experience in installation & commissioning of EGCS (marine scrubber) and BWTS.                                     | Docking Superintendent |
| 4      | Himashu Shaw | BE Mechanical Engineering  | 19                  | A competent Marine Engineer having a background of over 19 years in the shipping industry working as Superintendent. Delivered New Product Tanker as Delivery Site Team Chief Engineer. Rich experience in Project Management, Operations & Maintenance, International Laws, Audits and surveys, Commercial practices, Inventory Management.   | Docking Superintendent |
| 5      | Vuk Vuksic   | Mechanical Engineer & Naval Architect  | 18                  | Mechanical Engineer / Naval Architect (MSc NA) with 18 years of international experience on variety of vessel types with responsibility in project and technical management, consulting, design, quality control and estimations for new build, dry docking and retrofits. Leading new building and dry-docking supervisor for hull&outfitting, BWTS, EGCS, Performance Monitoring system retrofits etc on behalf of owners; shipbuilding designer/consultant  | Docking Superintendent |

# Meet Our Team

| Sr. No | Name                        | Qualification   | Years of experience | Experience   | Designation            |
|--------|-----------------------------|---|---------------------|--|------------------------|
| 6      | Amey Hajare                 | Shipbuilding Engineering + PG Diploma in Piping Engineering | 14                  | Technical Superintendent with 14+ years of vast experience in the Marine & Offshore industry including Vessel operations, Repairs and New build of Container & Diving support vessels - in Singapore, China, India, Turkey & UAE. Managed Drydock & New builds project in Major Shipyards.   | Docking Superintendent |
| 7      | Martin (Huang YongHua)      | Bachelors Naval Architecture and Ocean Engineering          | 15                  | Engineering expert in new Shipbuilding as a project manager. Attended as docking Supt, BWTS and EGCS Retrofits supervision, Docking assistant in ship-repairs. Expert in New build as well as repairs industry, worked for 20+ new building projects as the General project Manager, 100+ Retrofits projects.  | Docking Superintendent |
| 8      | Yang Haichao                | Bachelors naval architecture and ocean engineering          | 15                  | 15 years relevant working experience from Oil & Energy Industry, and offshore/repairing ship project such as jack-up unit, ship construction and Arrangement. Skilled in structure/hull Arrangement such as fit-up, welding, dimension, material control, final Arrangement and review material certificates, AWS, ABS, DNV, etc.  | Docking Superintendent |
| 9      | Zheng Peng                  | BE In Naval Architecture & Marine Engineering               | 14                  | 14 years experiences as a Docking Superintendent & Ship Repair Manager for Dry Docking of vessel, conversion ,BWTS installation and Scrubber installation system , finished about 120 dry docking vessels. Types of ship (Bulk carrier / Container carrier / Gantry crane ship /Oil tanker/ Chemical tanker/semi submerged ship /LPG and so on) Repair or Modification. 3 months experiences of 40/45 ft LNG tanker containers manufacture..Have worked for 90+ all kinds of vessel dry-docking, 10+ Retrofits projects.         | Docking Superintendent |
| 10     | Baghyarajan Murali Krishnan | Diploma + Mtech   | 13                  | Post Graduate Mechanical Engineer with demonstrative expertise in Engineering & Construction - Shipbuilding / Repair, Offshore Structures - Floating & Fixed.<br>Competencies: Basic and Detail Marine Design engineering including Naval Architectural aspects like Stability & Structural Integrity; Project Management & Site execution including construction, annual dry docking, commissioning & handover; Marine Survey(Hull & Machinery) for ship owners/operators, authorities, underwriters & Classification societies | Docking Superintendent |



# Meet Our Team

| Sr. No | Name                   | Qualification                                | Years of experience | Experience   | Designation            |
|--------|------------------------|--|---------------------|--|------------------------|
| 11     | Dattaram Bharat Dessai | BE Mechanical Engineering                    | 13                  | Mechanical Engineer with versatile experience in the field of QA/QC, Production, Commissioning and Project management. Have worked in different sectors of ship building, conversion, repairs and retrofit projects in Asia and Europe. Worked with Keppel Shipyard-Singapore and completed drydocking of vessels in Asia, Middle East and Europe  | Docking Superintendent |
| 12     | Vasanth Kumar          | BE Naval Architect                           | 10                  | Naval Architect & Offshore engineer - Expertise in ship & offshore repairs in all departments, in water surveys , damage survey , Ihm survey and handling docking & retrofits projects from start to end ,worked across the globe on varies sites. Also worked with repairs of Defence vessels. Have completed 50+ drydocking of vessel and experience in major shipyard worldwide   | Docking Superintendent |
| 13     | MaXiongWei             | Naval Architecture and Ocean Engineering     | 17                  | Project manager/Superintendent/BWTS retrofits engineer.<br>17+ years Experience in various new shipbuilding and vessel repairing as a senior hull and outfitting inspector or docking assistant.<br>Good experience in the newbuilding as a Project manager and Good experience in the vessel repairing as the attending superintendent  | Docking Superintendent |
| 14     | Xu Wei                 | Bachelors in Shipbuilding and Ship Repairing | 28                  | Senior Hull and outfitting inspector/Project Manager/DA.<br>28+ years Experience in various new shipbuilding and vessel repairing as a senior hull and outfitting inspector or docking assistant.<br>Good experience in the newbuilding as a General project manager.<br>He has a lot of kinds of vessel shipbuilding experience,Container vessel,Crude oil tanker,Oil tanker Bulk carriers and others for the client of Maersk,MSC and CMA CGM.<br>Be familiar with international codes, such as AICS, AWS, ABS, ASME, API, DNV, RINA and LR. | Docking Superintendent |

# Meet Our Team

| Sr. No | Name                    | Qualification   | Years of experience | Experience  | Designation                         |
|--------|-------------------------|---|---------------------|---|-------------------------------------|
| 15     | Veerendra Chandavar     | Diploma in Mechanical Engineering                                     | 20                  | Experienced as Sr. Hull Surveyor with Lloyd's Register Classification for new building of FPSO (British Petroleum), VLCC of 300K+ ( Hanjin & Oman shipping), MR Tanker 40K & 50K ( British Petroleum) and VLOO 310K - Very large Oil and Ore Carrier VLOO for (TMT & Co. Taipei). Project Management & Site execution including construction, annual dry docking, commissioning & handover; Marine Survey(Hull & Machinery) for ship owners/operators, authorities, underwriters & Classification societies | Docking Assistant / Hull Specialist |
| 16     | Vijay Jagannath Mayekar | BE Mechanical Engineering   | 20                  | Worked as Surveyor, in classification societies like Det Norske Veritas (DNV) and Indian Register of Shipping (IR Class). Completed new build & drydocking of vessels in India & Abroad. Leading new building and dry-docking superintendent for hull&outfitting, BWTS, retrofits etc on behalf of owners; shipbuilding designer/consultant   | Docking Assistant / Hull Specialist |
| 17     | JiangWei                | Electrical Engineering  | 12                  | Electric inspector, DA and BWTS/EGCS retrofits engineer<br>12+ years Experience in various new shipbuilding, vessel repairing and newbuilding as electric supervisor or docking assistant.<br>Have over 30+BWTS and EGCS retrofits experience.<br>Be familiar with international codes, such as AICS, AWS, ABS, ASME, API, DNV, RINA and LR.  | Machinery / Retrofit Specialist     |
| 18     | Vijay Sapkal            | Diploma in Mechanical Engineering; Post Diploma in Piping Engineering | 17                  | Mechanical Engg. having 17+ years of experience in various Shipbuilding / Repair, Retrofit installation/commissioning, Modification, life extension, Onshore / Offshore projects into Vendor Inspection / Expediting in Structural / Piping, raw material inspection, pipe fittings, Industrial valves, Fabrication Welding inspection, Piping, Pressure Vessels, Heat exchangers.  | Docking Assistant / Hull Specialist |
| 19     | Venkit TS               | Diploma in Instrumentation  | 30                  | Worked in Offshore and onshore in India and abroad for various projects from 1983 to 2004. Like. Petroleum, cement industries and oil and gas industries. Worked as Project Manager & Site Manager for new shipbuilding, retrofit project like scrubber and BWTS.<br>New shipbuilding experience in Oil Tankers , container carriers, Platform supply vessels (DP-1& DP-2), self unloaders and diving support vessels .<br>Having thorough knowledge in all classification rules and QA /QC.                | Machinery / Retrofit Specialist     |

# Meet Our Team

| Sr. No | Name                        | Qualification  | Years of experience | Experience  | Designation                         |
|--------|-----------------------------|--|---------------------|---|-------------------------------------|
| 21     | Sudhakar                    | Diploma In Mechanical Engineering<br>Hydraulics Engineering course                     | 23                  | 23 years of experience in the field of NEW Shipbuilding Supervision, ship repair and conversion projects. Project supervision for Retrofit of scrubber system, Retrofit of Ballast water treatment system and dry docking and repairs, including hull, outfit, painting and machinery jobs. Proficient in handling many types of problems and difficulties in new buildings, conversions and repairs project. | Machinery / Retrofit Specialist     |
| 22     | Liu XiaoFu(Darren Lau)      | Bachelors in Machinery   | 17                  | 17+ years Experience in various new shipbuilding,vessel repairing and offshore as a machinery or docking assistant.<br>Good experience in the newbuilding as a project manager.<br>Be familiar with international codes, such as AICS, AWS, ABS, ASME, API, DNV, RINA and LR.   | Docking Assistant / Hull Specialist |
| 23     | Dawei, Zhang (David, Zhang) | Marine Engineering Technology  | 14                  | Machinery inspector and BWTS/EGCS retrofits engineer<br>Experience Brief:<br>14+ years Experience in various new shipbuilding,vessel repairing as a machinery supervisor or docking assistant.<br>Have over 50+BWTS and EGCS retrofits experience.<br>Be familiar with international codes, such as AICS, AWS, ABS, ASME, API, DNV, RINA and LR.  | Machinery / Retrofit Specialist     |
| 24     | LiHuan(Ethan)               | Wuhan Shipbuilding Vocational And Technical College(Welding technology and automation) | 13                  | 13+ years Experience in various new shipbuilding,vessel repairing and offshore as a senior hull and outfitting inspector or docking assistant.<br>Held the certificate of CSWIP3.1.<br>Be familiar with international codes, such as AICS, AWS, ABS, ASME, API, DNV, RINA and LR.   | Docking Assistant / Hull Specialist |

# Meet Our Team

| Sr. No | Name            | Qualification                                   | Years of experience | Experience   | Designation       |
|--------|-----------------|---|---------------------|--|-------------------|
| 25     | Rohit Dhumale   | BE/BTech - Mechanical + Marine Engg             | 17                  | Marine Engineer sailed on vessels as 3Eng, vast experience in Project Mangement & site Execution. Attended Ship drdock, Inspections & valuation of vessels. Good knowledge in understanding the operations onboard and trouble shooting the systems  | Docking Assistant |
| 26     | Baskar Subbarao | Diploma in Mechanical Engineering; MEO class IV | 20                  | Marine Engineer sailed on Tanker vessels as 4th Engineer. Worked as Structural Engineer for Drydcoks and new build projects in India, China. dry-docking supervisor for hull&outfitting, BWTS, EGCS, Performance Monitoring system retrofits etc on behalf of owners; shipbuilding designer/consultant | Docking Assistant |



# Our Group of Companies

## 2knots

### CORPORATE OFFICE: INDIA

1101, Lodha Supremus-B,  
Kolshet Road, Thane (W) – 400604, India  
[info@21-knots.com](mailto:info@21-knots.com)

## 2knots

### REGD. OFFICE: JV

05-24, AZ Building  
140 Paya Lebar Road, Singapore  
[singapore@21-knots.com](mailto:singapore@21-knots.com)

## 2knots

### REGD. OFFICE

A1 – 317D, AFZ A1,  
Ajman Free Zone, U  
[info@21-knots.com](mailto:info@21-knots.com)

### Joint Venture



### CORPORATE OFFICE: USA

15 Prospect Lane, Suite 2-AB  
Colonia, NJ 07067, USA  
[mdu@mduinc.net](mailto:mdu@mduinc.net)



## 2knots