



***MARINE***

# Introduction



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- ▶ History
- ▶ Company Values / Aims
- ▶ Work Scope
- ▶ Project Management
- ▶ Subsea Intervention Daughter Craft
- ▶ Surface Diving System
- ▶ Workshop
- ▶ KD Marine Video



# History



KD Marine was formed in 1989 to fill a market niche for a more focused underwater contractor servicing the needs of the offshore oil and gas industry.

As times moved on KD Marine has moved with them. We have built new systems, including our two custom designed Subsea Intervention Daughter Crafts.

KD Marine's success stems from the close relationship that management maintains with the day to day operations; and in our ability to be proactive and highly flexible in a rapidly changing business environment.

# Company Values



- ▶ KD Marine aims to be the premium source of commercial diving and underwater intervention services to the offshore oil and gas industry.
- ▶ To be recognised as the most reliable, safe and forward thinking company within our market.
- ▶ To provide a superior service to our clients by using the vast knowledge and experience of our employees matched with our purpose built high quality equipment.

# Company Aims

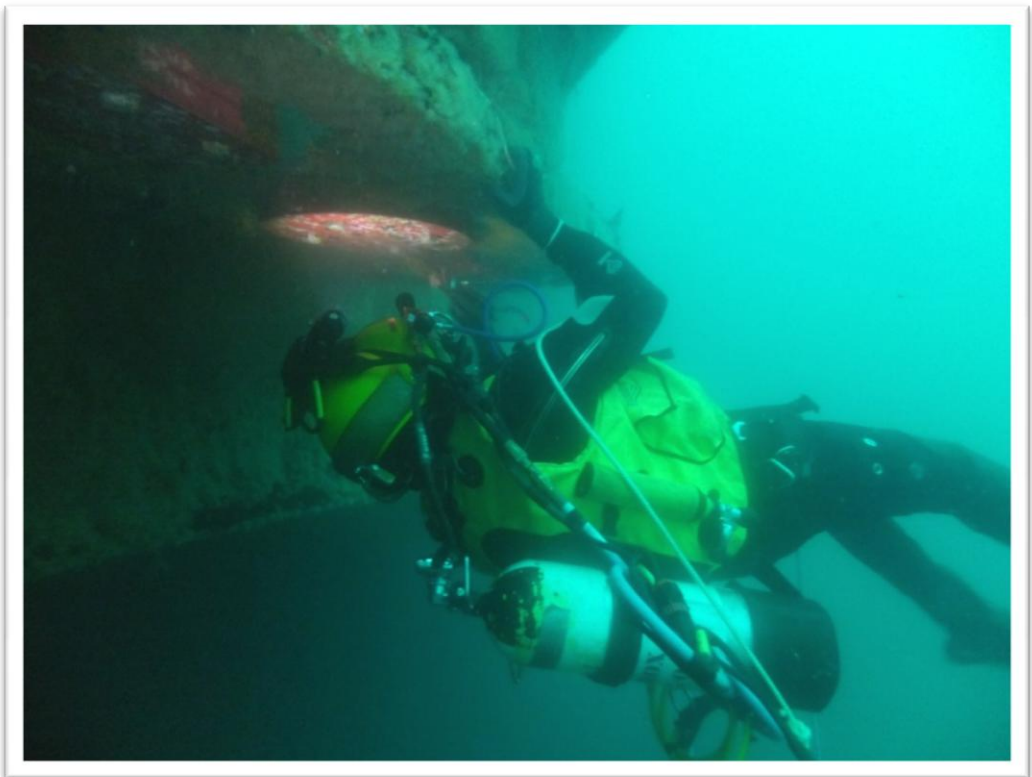


- ▶ To be the first choice provider in our market for the offshore oil and gas industry.
- ▶ We must continue to offer world class performance coupled to flawless safety performances.
- ▶ We must continue to impress our valued customers with our abilities and our competences.

# Typical work scopes...



- ▶ Underwater Construction
- ▶ U/W Cutting & Welding to AWS D3.6
- ▶ IRM
- ▶ Pipeline & Cable
- ▶ Abandonment
- ▶ SMB
- ▶ FPSO, FPF & Rigs
- ▶ ROV & Survey
- ▶ Support Vessels
- ▶ Engineering



# Underwater Construction



- ▶ Installation, lifting, rigging, positioning of U/W equipment
- ▶ Risers, caisson and clamp installation.
- ▶ Removal of installation aids, piles, pile guides buoyancy chambers etc.
- ▶ Cable & flow-line pull-in and connection.
- ▶ Structural steel installation and removal.
- ▶ Seabed manifolds, templates and protection structures

# U/W Cutting & Welding to AWS D3.6



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- ▶ Wet welding.
- ▶ Dry (hyperbaric) welding in surface diving range.
- ▶ Dry (hyperbaric) welding in sat diving range.
- ▶ U/W arc & gas cutting and gouging.
- ▶ U/W cold cutting.
- ▶ Friction welding stud and stitch.



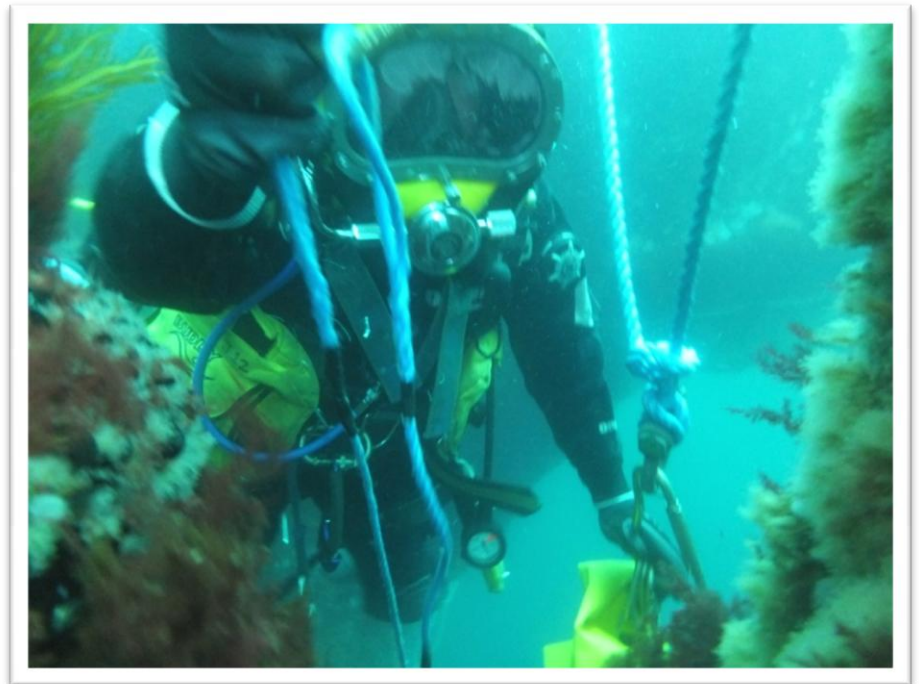
- ▶ U/W NDT & inspection of fixed and floating structures.
- ▶ Marine growth removal, blasting & cleaning.
- ▶ Application of protective coatings.
- ▶ Anode replacement.
- ▶ Mooring replacement/repair on FPSO's



# Pipeline & Cable



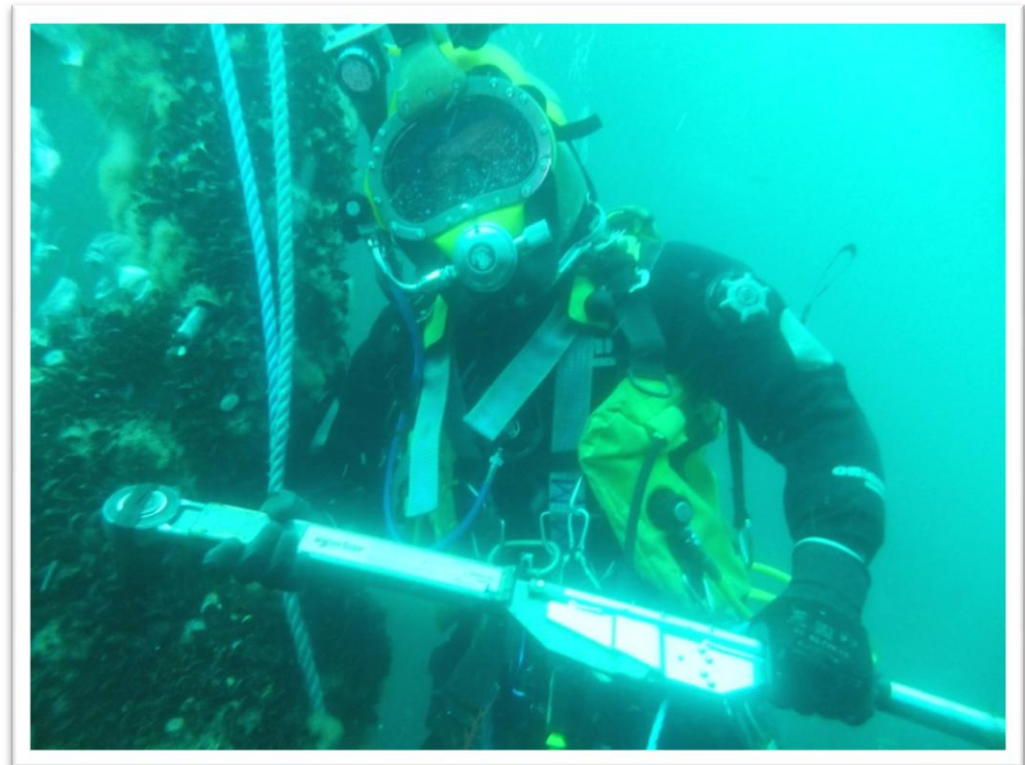
- ▶ Pipe and cable lay support.
- ▶ Pipeline & cable tie-in/pull-in.
- ▶ Pipeline and cable crossings.
- ▶ Flexible pipe & cable.
- ▶ Rigging & testing.
- ▶ Trenching support.
- ▶ Burial & de-burial.



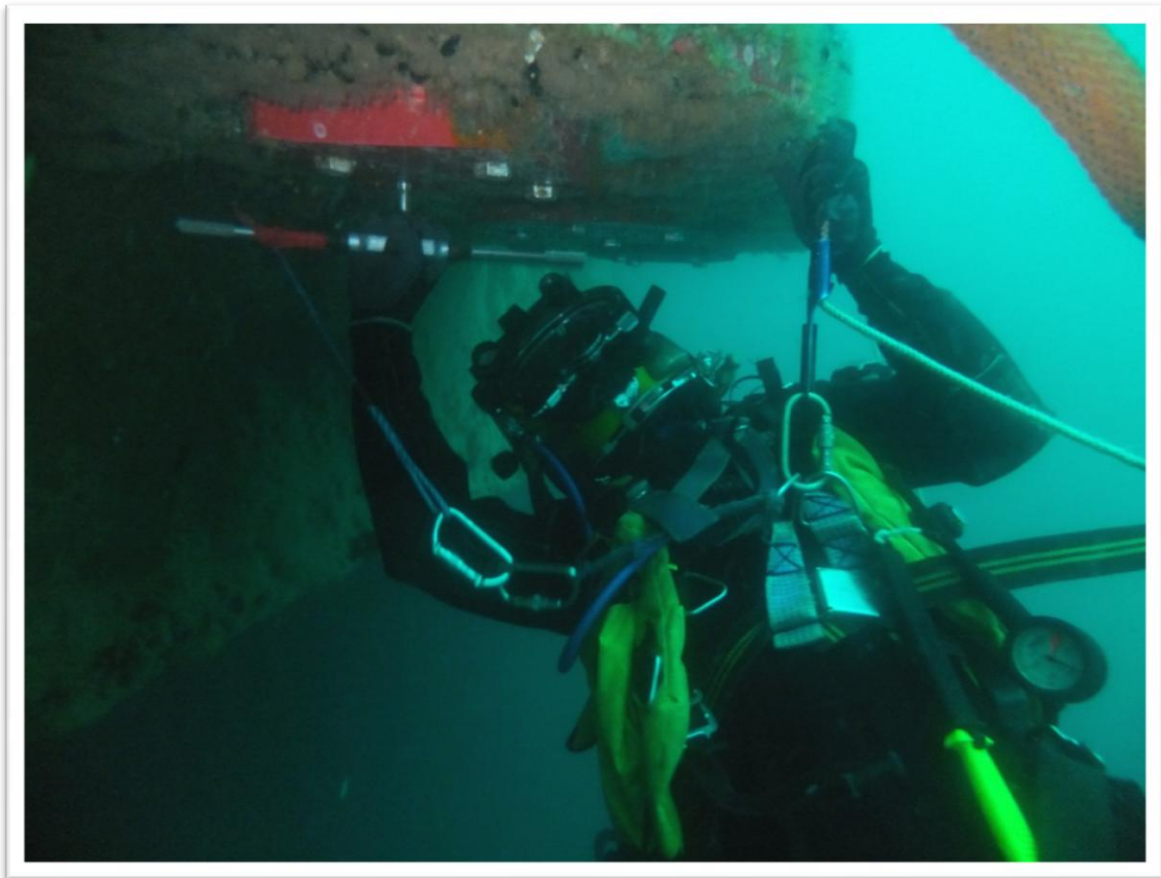
# Abandonment



- ▶ Abandoned well removal by explosives, cold cutting & mechanical techniques.
- ▶ Removal of U/W equipment, pipelines, cable & flow-lines.



- ▶ Hose and moorings change outs.
- ▶ PLEM & pipeline maintenance.
- ▶ Installation & removal.
- ▶ General maintenance.



# FPSO, FPF & Rigs



- ▶ Thruster installation and removal.
- ▶ IRM and class surveys.
- ▶ Sea chest and valve maintenance.
- ▶ CP system maintenance.
- ▶ Hull and structural repairs and emergency repairs.
- ▶ Turret maintenance, riser and moorings installation/removal



# ROV & Survey



- ▶ Observation/Inspection class (in house or sub contractor).
- ▶ Ultra deep water and work class systems (via specialist sub-contractor).
- ▶ Positioning and navigation (via specialist sub-contractor).
- ▶ Pipeline survey (via specialist sub-contractor).

# Support Vessels



- ▶ Each vessel is specifically selected for its purpose.
- ▶ All vessels are engaged on time charter.

Common vessels used include:

- ▶ DP DSV (Dynamically Positioned Diving Support Vessel).
- ▶ DP ADSV (Dynamically Positioned Air Diving Support Vessel).
- ▶ ADSV (Moored Air Diving Support Vessel) often a PSV or AHT will be used.
- ▶ DP ROVSV (Dynamically Positioned ROV Support Vessel)

# Engineering



- ▶ Project procedures and operational engineering is managed in house.
- ▶ Design and specialist engineering functions are managed by a specialist sub-contractor. We enjoy a close working relationship with Cognito and AEC Technology on engineering matters.

**COGNITY**  
ENGINEERED DESIGN





# Project Management



- ▶ KD Marine offers 35+ years of experience and knowledge.
- ▶ It is this skill set and knowledge in this area that sets us apart from the competition.
- ▶ Having done this for many different clients we know where issues might arise.



# Project Management



- ▶ When we take on a project we realise that our clients may not be completely familiar with everything that is required to complete a diving project.
- ▶ Or what is required of them in regards to diving operations.
- ▶ We help you ensure that everything within your organisation is in place to help make the project run as smoothly as possible.
- ▶ This can be changes to your SMS or amendments to and installation/FPSO's safety case in relation to diving activities.

# Subsea Intervention Daughter Craft



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The KD Marine Daughter Craft provide an enhanced and highly efficient access system for divers or ROVs around offshore production installations and facilities. It also facilitates diving to be performed from non diving support vessels.





# Subsea Intervention Daughter Craft

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As well as being able to access difficult and remote positions they can also facilitate simultaneous working on multiple work faces thus increasing productivity.



# Subsea Diving Systems



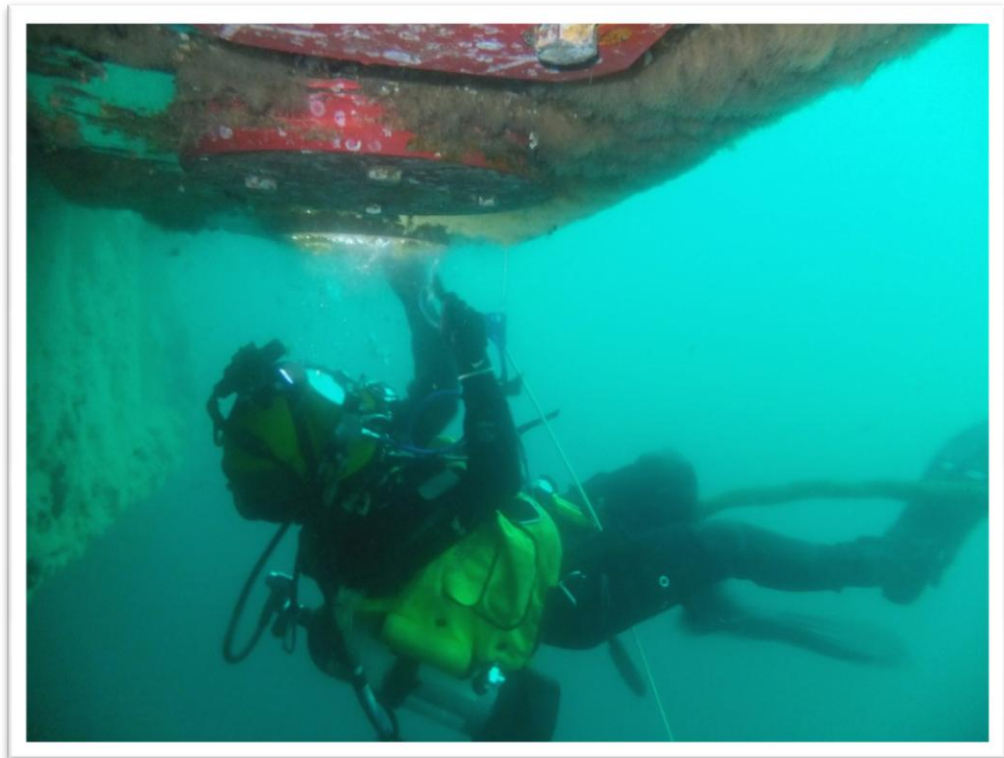
KD Marine's surface diving systems embody over 35 years of experience in providing diving services on offshore exploration and production installations. The systems maintain a high standard of safety and reliability yet has a minimal footprint and interface impact on the installation.



# Subsea Diving Systems



All offshore installation based diving employs EAD (equivalent air depth) decompression methods and uses a nitrox breathing medium therefore no decompression penalties are incurred and operations remain within PFEER (Prevention of Fire, Explosion and Emergency Response regulations).

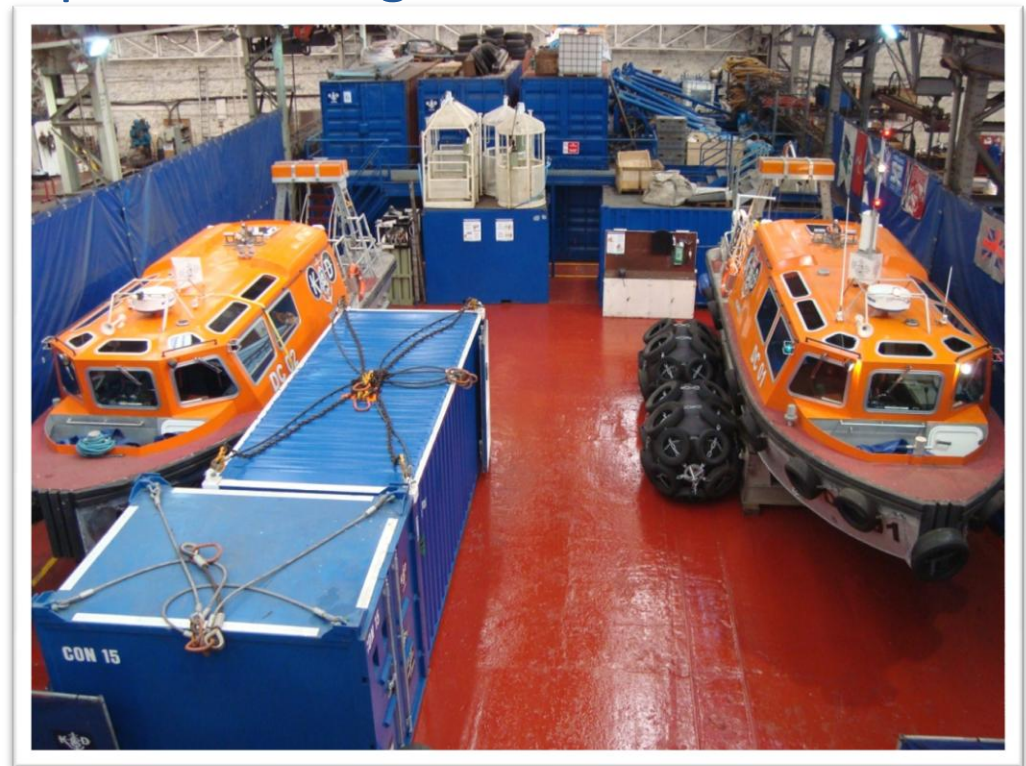




# Workshop



- ▶ Around the corner from our offices is our workshop.
- ▶ Comprises of 7 members of staff.
- ▶ They are the ones that keep KD running.
- ▶ The workshop is over 6800 sq ft.
- ▶ We also have a storage yard on Minto Ave.
- ▶ And we rent premium space on the harbour quayside.



# Quality & Environmental



- ▶ KD Marine is fully committed to the delivery of a quality service to every client on every occasion.
- ▶ KD Marine's quality management system is certified under the international quality standard: ISO 9001.
- ▶ KD Marine's environment management system is certified under the international standard: ISO 14001.
- ▶ KD Marine is an contractor member of IMCA.
- ▶ KD Marine are Registered with FPAL Supplier No 42863.
- ▶ KD Marine is approved by DNV for in-water survey of offshore installations.





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