# **Alan Waters**

# **Profile**

Alan is a versatile and experienced offshore engineer. He is strong on analysis with project engineering and offshore experience on a range of installation projects. His broad based engineering education and his subsequent project and hands-on experience give him the ability to achieve within a wide range of applications, including naval architecture, structural, marine and hydrodynamics.

#### **Skills**

- A solid grounding in a range of engineering principles, mainly in mechanics, structures and hydrodynamics.
- Very numerate. Has generated a variety of algorithms to describe complex system behaviour, and then developed computer programs to solve these.
- Writes clearly and accurately in documents such as specifications, studies, operational procedures and reports of analytical results.
- A range of business skills learned by starting and managing a small business.
- Experienced in the use of many computer systems including the usual office programs, plus others such as AutoCad, MathCad, Ariane and Orcaflex. Has also written some routines in the Python language.

## Qualifications

- Chartered Engineer (C.Eng.)
- Member Institute of Marine Engineering, Science and Technology (MIMarEST)
- BA (Hons) & MA (Hons) Engineering, Gonville & Caius College, Cambridge University
- · Offshore Safety Training Certificate

## General

- Excellent health
- · Full clean driving licence
- Married (children now independent)
- · Offshore safety training certificate

### **Contact details**

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# **Experience**

## August 2012 to Present

# **Anguest Ltd – Consultant Engineer**

Operating as an independent offshore engineering consultant. Projects undertaken include:

- Develop routine in Python for sizing piles for subsea current turbines (SMD).
- Risk assessment for adding hammermill to drillship (Noble Globetrotter 2).
- Routine for generating DP capability curves for twin hulled installation vessels (Blade Offshore).

# December 2009 to July 2012

# **Orwell Offshore Ltd – Principal Engineer**

Orwell Offshore is a naval architecture and offshore engineering consultancy, with offices in Woodbridge and Singapore. Projects undertaken whilst at Orwell include:

- Feasibility assessment for modifying an existing STP buoy for increased duty (Rubicon Balnaves).
- Independent Technical Assessment of a new pontoon based personnel landing system at Devonport (FenderCare).
- Mooring analysis for an FPSO upgrade from a SALM to permanent spread mooring system (Rubicon Vantage).
- Assessment of alternative FPSO mooring systems (Woodside Lady Nora).
- Design of a floating jumper system and calculation of impact loads between an FPSO and PCALM buoy (Rubicon Galoc).
- Calculation of soil loads and pile size, and preparation of installation procedures for a supply boat mooring system (ONGC RS-12).
- Generation of a generalised solution for sizing piles for supporting subsea current turbines (Blade Offshore).
- Acted as client representative on board survey vessel during a geotechnical survey at the Galoc Field, offshore Philippines (Rubicon Galoc).
- Dynamic analysis of flexible riser system (Rubicon Galoc).
- Assessment of barge mooring system during load-out of 35,000te topsides at fabrication yard (Woodside North Rankin B).
- Independent Technical Assessment of a pontoon bridge (APB Marine ExCel Supplementary Access Project).
- Reassessment of loads on topsides modules under revised FPSO accelerations (Woodside Northern Endeavour).

#### June 2008 to November 2009

#### Havtroll AS - Consultant

Seconded to Technip Norge AS, Sandvika, Norway, as Senior Installation Engineer.

StatoilHydro Hywind project - the first offshore floating wind turbine. Developed the outline procedures for upending and ballasting the 117m long substructure, and for the sea tow and installation of the assembled system. Package responsible engineer for the mooring system, and specified and reviewed the subcontracted mooring system analysis.

Burullus WDDM Project Phase 7 Bid. Prepared method statement for the marine operations for subsea installation work, including two hot taps, offshore Egypt. (Bid successful.)

Conoco Phillips Ekofisk. Package Responsible Engineer for installing an umbilical between an existing platform and a water injection manifold. Developed the umbilical testing philosophy and the installation procedures. Project Engineer offshore for installation of the umbilical and a flowline.

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# Ebeco UK Ltd, Redhill, Surrey - Managing Director

Imported and distribed electric underfloor heating systems. Managed the new company which was set up as a joint venture with Ebeco AB of Gothenburg, and which took over the assets and staff of Penguin Europe Ltd (see below). No remaining interest in running the company, which is now operating fully as a subsidiary of Ebeco AB.

#### 2000 to 2005

# Penguin Europe Ltd, Redhill, Surrey - Managing Director

Started up the company which reached a turnover of  $\mathfrak{L}^3$  m with a staff of 5 by the time Ebeco AB of Gothenburg, who had recently become the major supplier, proposed a new joint company.

#### **Earlier Experience**

# Approx 25 years in Offshore Industry

Principal Engineer on many projects, mainly related to the analysis and planning of marine operations associated with the installation of offshore platforms and subsea equipment. Included the Conoco Hutton Project (1980 – 1985) and the Saga Snorre Project (Norway, 1988 – 1992). These were both pioneering Tension Leg Platforms (TLPs) with heavy involvement in developing new analytical methods, preparing the installation procedures, and working with the installation contractors. Acted as onboard Mooring Specialist, advising on procedures and ensuring that TLP draught and tether tensions were set within tolerance during the installation in the North Sea of both of these platforms. The unique knowledge and value to the clients were demonstrated by the length of time retained on these projects by the client oil companies.

#### Aug '98 - Mar '99

# Rockwater Saipem Joint Venture, Stavanger Senior Project Engineer

Statoil, Asgard A Riser Installation Project

Technical Supervisor, responsible for co-ordinating team of 6-8 engineers.

## Apr '97 - Apr '98

# Stolt Comex Seaway Ltd, Aberdeen

### **Senior Project Engineer**

British Arco Bladon, Chevron Alba and Phillips Renee & Rubie Projects

Project engineering to prepare for and perform the installation and tie-in of the flexible riser and subsea systems.

#### Jan '96 - Apr '97

# Rosewood Engineering Ltd, Reigate

### **Director**

Started up own engineering related company, and transferred the running of it to permanent staff.

## Oct '95 - Dec '95

# Mentor Engineering Consultants Ltd, Aberdeen Senior Subsea Engineer

BP Ltd - Foinaven Core Development Project

One-man project to write the Pipeline Response Scheme.

#### Jan '95 - Oct '95

# Mcdermott Subsea Constructors Ltd, Middlesbrough Subsea Installation Engineer

BP Ltd - Foinaven Core Development Project

Prepared the procedures for the installation of flexible jumpers in 500 metres water depth.

Jun '87 - Nov '94

## Aker Oil And Gas Technology Uk Plc, London

## **Principal Marine Engineer**

Oct '92 - Sep '94: Conoco Norway Inc - Heidrun Tension Leg Platform Project

Secondment to Norwegian Contractors, Oslo. Preparation of the procedures for attaching the TLP to the pre installed tethers.

Mar '88 - Jun '92: Saga Petroleum a.s. - Snorre Tension Leg Platform Project

Secondment to Aker Engineering, Oslo. Lead Engineer responsible for producing the design premises and operating philosophy for the hull's marine systems and for the tether running and connection procedures. Also responsible for the analysis of tether behaviour during installation. Prepared a detailed installation procedure, followed by the specification for tether deployment. Acted as their adviser during offshore installation of the TLP.

Jun '87 - Jan '88 : Various Clients

Other smaller projects, including writing a 3 dimensional static flexible riser analysis program in Fortran.

### Oct '83 - May '87

# Brown & Root (UK) Ltd, London

### **Principal Engineer**

Conoco Hutton TLP Project

Began this project when with VO Offshore (5 years total). Analysis of TLP and tether behaviour. Acted as tether specialist on board during the installation of the TLP.

May '85 - May '87: Various Clients

Other smaller projects.

## Apr '76 - Oct '83

### Vo Offshore Ltd, Barrow-In-Furness

#### **Senior Engineer**

Analysis of the tether system for the Conoco Hutton TLP. (Transferred to Brown & Root during Hutton Project, whilst retaining same position in the VO/B&R Joint Venture).

A range of other front end projects, such as the BP SWOPS feasibility study and investigating the use of Jim suits for subsea maintenance.