ADRIAN HOWARD-JONES Name:

Disciplines:

Project Management, Project Engineering, Subsea Pipelines, Subsea Engineering, Offshore Structures.



Tweedsmuir Co-bundled Spools and Seafastenings

Contact Details:

Telephone:	+44 (0) 20 8657 2782	.,				
Mobile:	ile: +44 (0) 79 8060 2342					
E-mail:	adrian@subsea.plus.com					
Home Location:	Sanderstead, South Croydon Surrey, England					

Howard-Jones A / 2008/ P15 Page No. 1 of 12

Name: HOWARD-JONES First Name: ADRIAN

Nationality: BRITISH						
Discipline	Project Management, Structural Engineering, Subsea Pipelines, Subsea Engineering.					
Qualifications:	BSc hons Civil Engineering	1967				
	MSc Structural Engineering	1968				
	MBA	1990				
Professional Associations:	Chartered Engineer (C.Eng)	1973				
	Member of the Institution of Civil Engineers	(MICE)				
	Member of the Institution of Structural Engineers	(MIStructE)				
	Member of the Offshore Engineering Society	7				

CAREER SUMMARY

A Chartered Engineer with extensive experience of subsea and offshore engineering design, installation engineering and development work. This includes design experience of offshore platforms (topsides, substructures and foundations), subsea installations, subsea pipelines for shallow and deepwater projects, 'J' lay and 'S' lay of pipelines, pipeline trenching, rigid and flexible pipelines, towed bundles, riser systems, subsea connection systems, construction vessels, and FPSO moorings.

He has worked at a senior level in both client and contractor organizations leading, supervising, monitoring, reviewing or performing design.

He has:

- developed and presented design concepts and field development concepts,
- prepared technical documentation and procedural guidelines,
- performed design and analysis for offshore structures (topsides and substructures), subsea installations and subsea pipelines,
- prepared proposals for design and construction projects.
- led design teams and managed projects,
- reviewed contracts, specifications, design, materials, equipment & instrumentation,
- liaised with Certifying Authorities, clients, contractors, vendors and constructors,
- managed, and taken part in research and development projects,

Experience has included structural, subsea and pipeline projects in the North Atlantic, the North Sea, the Mediterranean, South America, Mexico, West Africa, the Arabian Gulf and the Caspian.

He can speak French and has worked abroad in Norway, Holland, and the USA.

DETAILED PROFESSIONAL EXPERIENCE

2006 to 2007 KW Ltd - London

Consultant.

- Consultant. Undertook a formal independent design review of input information, and all output specifications, calculations documents and drawings for platform structures (jackets and topsides) for the Eastern Mediterranean for oil co client management team.
- Project Manager. Installation engineering support for Sonsub (installation contractor) for installation of 43 pipeline spools for the **Talisman Tweedsmuir** field. The work included static and dynamic analysis of spools, consideration of wave slam effects, design of rigging, seafastenings, vessel deck layouts, lifting studies for twin crane lifts and other associated services.
- Project Manager. Studies for deepwater repair to fractured pipeline offshore Angola in 1400 m water depth.

2005 - 2006 Granherne KBR

Principal Pipeline Engineer (Consultant).

- Prepared report on pipeline installation techniques for the concept selection phase of the Agip Kashagan FFD development located in the Caspian Sea.
- Assisted in preparation and presentation of the mechanical design report and in studies on HTHP pipelines.

2003 –2004 Penspen/ Andrew Palmer and Associates

 Aberdeen Office. Lead Engineer: ChevronTexaco Subsea FEED for the development of the Captain C area. The work involved design of subsea manifolds (structures and equipment) and subsea pipelines.

London (Richmond Office) Lead Engineer.

- Undertook design audit for pipeline designs for Balongan offshore Indonesia.
- Managed front-end study for a new deepwater (1500m) trans-Mediterranean gas transportation pipeline (details confidential).
- CRE (Commission for Regulation of Energy, Mexico, Penspen Mexico). Advice to CRE in Mexico City on subsea pipeline, construction, and structural aspects of an application for a Gravity Base Structure for LNG storage offshore Baja California.
- Design Review for ENPPI Rosetta II development pipelines.
- Internal work on proposals for pipeline projects in Offshore USA and Australia.
- Transco Humber River Crossing. Assessed risk of VIV on exposed pipeline span, and calculated fatigue life of pipeline in respect of forecast tidal ranges and associated current velocities. Provided guidance on the interpretation and presentation of survey data.

2002 - 2003 Halliburton KBR Pipeline Engineering Group

Principal Pipeline Engineer

- Dolphin Midstream FEED project for a 48" gas export pipeline in the Arabian Gulf. Led prequalification review to shortlist EPC contractors for the supply and installation of sealines, the 48" diameter export pipeline with onshore receiving facilities, and offshore platforms. Undertook assurance reviews of project documentation. Prepared response to contractor endorsement comments.
- Statoil Ormen Lange development. Reviewed basis of design, prepared CTR activity
 worksheets for the FEED and detailed engineering phase of the work. Prepared report
 on possible landfall locations on the east coast of England identifying available sites
 and the appropriate method of construction.

- Undertook an independent design review for the FEED study on the 180 km, 28" dia. gas export pipeline from the AIOC Azeri Field to the shore terminal at Sangachal (Azerbaijan, Caspian Sea).
- Reviewed FEED documentation and prepared detailed engineering reports for reeled pipeline with co-bundled umbilical for **Statoil Mikkel** field development. The work covered the interpretation of FEED design reports, survey, and geotechnical data, review of pipe sizing, route alignment, investigation of spans with respect to VIV and fatigue, consideration of expansion and the avoidance of upheaval buckling.
- Provided support in Norway to the Subsea7 team during the construction phase of Statoil Mikkel helping to resolve late running issues on route alignment and installation procedures.
- Developed or contributed to proposals for pipelines including, deepwater (PDEG Brazil) and shallow water (Kashagan Kazakstan).
- Co-authored technical papers on pipeline installation.

1996 - 2002

FUEL Subsea Engineering

Principal Subsea Engineer Responsible for leading the analysis group.

(The Netherlands).

Worked with Smit Maritime Contractors (SMC) in Rotterdam (October 2000-2002), calling off engineering support from Fuel's Woking office as necessary.

Led subsea engineering input for SMC proposals for deepwater construction projects (including Bonga, Corrib, and others).

Lead Subsea Engineer for the construction of the **Coparex Isis** project offshore Tunisia. This was for the installation of subsea infrastructure (flowlines, umbilicals, subsea controls, tie-ins etc.) and for the construction of a TCMS (Tripod Catenary Mooring System) with five flexible risers threaded through guides attached to the bow chafe chain of the **Ikdam** FPSO. Developed the detailed mooring procedures for the pick-up of the FPSO bow mooring from a temporary supporting buoy.

(Fuel Subsea Woking office)

Project Manager for engineering support services to Cameron for subsea engineering of manifolds and SSIV structures for the **Agip** Western Area gas field developments for offshore Libya.

Lead engineer for the design of the diverless 'DMaC' Central Manifold (350 metres w.d.) for BP Schiehallion Field in the North Atlantic west of the Shetland Islands. Directly responsible for the design of the structure, foundations and installation design. The Central Manifold is a monopile-supported structure weighing approx 160 tonnes in air. It comprises the manifold and an independently retrievable Control Distribution Trunking package. A purpose designed hydraulic lifting frame enables recovery of the manifold and/or the CDT.

Specified and supervised supply of an electronic acceleration monitoring package to detect and log unintended shock loads applied to the manifold during marine transportation and installation.

Led proposals for subsea construction projects, for subsea manifolds and/or for towheads for towed pipeline bundles (Buckland, Captain, Tune, Skene, Bijupera, Kissange and others).

Development work on new products including deepwater towed bundle concepts with review of available buoyancy media for depths in excess of 1000m. The work was undertaken as a part of a group effort between SMC, Fuel, and Smit Land&Marine.

Managed research and development study of grout anchored pipeline connections. The work involved materials testing, analysis, and the development of design methods.

Participated in the development of remote operated subsea tooling systems.

1996 Subsea Offshore Limited (Aberdeen)

Consultant. Undertook study on the installation of towed flexible risers for an FPSO in 300 m. water depth (**Asgard** field; Norwegian sector).

1996 Oceaneering (Great Yarmouth)

Consultant. Undertook study on grouting the piles of an existing North Sea Platform Jacket.

1993 – 1995 Northern Ocean Services (Middlesborough) Chief Analytical Engineer

Responsible for supervising structural, geotechnical, and pipeline engineering, naval architecture and subsea survey. Work on EPIC projects for **Heidrun** & **Foinaven** (500m wd): this included design of protection structures and riser bases, static & dynamic analysis of pipelay and tie-in operations. Other work included: many pipeline trenching bids & projects, analysis & design for equipment, construction and installation aids, and review & analysis of the system for reeling & laying rigid and flexible pipeline from the **Norlift**.

Lead Subsea Engineer

Detailed technical investigation of pipeline surveys and plough performance.

1993 Offshore Certification Bureau

Prepared draft guidelines on planning, design, construction and operation of subsea installations for the Health and Safety Executive (HSE).

1992 – 1993 London Offshore Consultants

Prepared technical evaluation report on installation design of flexible pipe tails & flowline jumpers for **Tordis** project subsea tie-ins.

1992 Volker Stevin Offshore by.

Resident Engineer in San Francisco USA

Project Engineer in Holland.

Supervised structure & facilities design of N.Sea EPIC project for an offshore loading tower for **NAM** with a tripod jacket and rotating superstructure.

1991 – 1992 Cooper (Cameron) Offshore Engineering.

Study Manager: Design of connectors for flexible risers for Norsk Hydro Troll floater.

Study Manager: Installation of subsea protection structure by jack-up rig for Amoco Netherlands.

Consultant: Conceptual design for rigid riser connections for Heidrun (Conoco Norway).

Structural Engineer. Contributed to subsea structures for Agip Toni field.

1990 - 1991 Marathon Oil (UK) Ltd

Subsea and general conceptual engineering studies for potential new field developments including subsea pumps, other equipment, instruments, control, pipe flow analysis, aspects of subsea process & field economics. Development and presentation of subsea field concepts. Evaluation of study for a subsea separator for the **West Brae** field.

1989 – 1990 Cameron Offshore Engineering

Saga Snorre project (EPCR) to supply the rigid riser system for the TLP.

Project engineer Responsible for external interfaces.

Project Safety Engineer. Co-ordinated safety and design reviews.

Package engineer for dynamic flexible flowline jumpers to link TLP trees to the topside piping system.

COE (internal). Prepared structural and piping sections for EPIC bids.

1988 Cameron Atkins Technology. Lead Structural Engineer Detailed design of subsea protection structures for ARCO Welland field.

1987 – 1988 Texaco Subsea and General Engineer Conceptual development of a subsea Multiphase Meter in an EEC joint funded project. The work included outline structural and piping design, and testing of advanced instrumentation.

1987 Bergen Engineering A/S (Norway)

Developed concept for a Stiff Moored Articulated Column including the layout, foundation design, and the method for installation.

Subsea installation engineering for **Statoil** Gulfaks C pipeline spoolpieces including installation procedures, sea-fastenings etc.

1986 McDermott Engineering

Structural Engineer

Design review and survey of offshore communications tower (Arpet FPT).

Design of jacket riser supports and pipeline pull-in clamps.

1982 – 1986 Brown & Root (UK) Ltd

Senior Project Engineer

UKAEA Undertook formal 'industry review' of research findings on fatigue of ring-stiffened joints for the UK Steel in the Oceans Research Programme (UKSORP)

National Oil Co. Libya. Drafted rules for Mobile Offshore Units.

A/S Norske Shell. Managed conceptual study for plate girder MSF for Troll platform including layout, service routes, access & maintenance, fire, explosion & escape safety, structural design.

ICI Petroleum Services. Managed multi-parameter study using historical database to develop predictive method to estimate the weight & cost of jackets for North Sea & GOM.

BP Norway. Responsible for producing detailed procedural design briefs for the ULA jackets. Led the design of ring stiffened joints, buoyancy tanks, boat impact analysis and subsea template docking system.

ELF Norge. Managed design of 117m flare boom for Elf Norge Heimdal.

BRITOIL. Led the design of a flare tower for Beatrice field.

Internal work. Corporate design audits, input to proposals, development of standards.
Attended courses for quality training, planning, and scheduling.

1980 – 1982 Davy McKee (Oil & Chemicals) Ltd

Principal Engineer for Offshore Structures

Administered all design activities for offshore structures. Developed standard for offshore topside module design.

ADNOC. Led design checks on platform and design of subsea reinforcement details. Undertook offshore survey visit to **Zakum** field platforms.

Amerada Hess. Led design studies for offshore structures in the Arzanah field.

1976 – 1980 Shell Exploration and Production.

Structural Project Engineer for Brent B and Brent D platforms.

Responsible for structural design activities including:

Supervision of the design consultants, review & approval of all ongoing structural design on **Brent B** and **Brent D**, and for liaison with CA, and Operators.

Supervision of design and fabrication contract for 300 ft. flare tower for Brent D.

Development and design of a mechanical under-deck access platform with a 28 metre horizontal reach for **Brent D**.

Project engineer supervising work on an **EEC** joint funded study into the attachment of additional risers to existing gravity platforms

1975 – 1976 Crest Offshore Engineering

Senior Structural Engineer

SNPA (Aquitaine). Structural project engineer for W.I. jacket (67m.w.d.), topsides, interplatform bridge and a 120 metre flare bridge and tripod for Ashtart field, offshore Tunisia. Responsible for leading structural design & liaison with client and certification authority.

1973 – 1975 McDermott Hudson Engineering

Senior Structural Engineer

ELF Norge. Lead Structural Engineer responsible for the design of a 93m long steel module support frame (MSF) for a concrete gravity platform (**Frigg TP1**).

ELF Norge. Designed steel jacket and foundation piling for 102m WD North Sea field.

GULF Zaire. Prepared bid designs for offshore structures.

Note: This concludes the summary of experience in offshore and subsea engineering. Prior to 1973 A.L.Howard-Jones worked with:

1971-1973 Selection Trust Engineering Division.

Structural engineer.

Designed surface structures for copper ore handling and production for the **Bamangwato Concessions Ltd.**, Pikwe, and Selebi developments.

1968-1971 BICC Construction Co.

Development engineer.

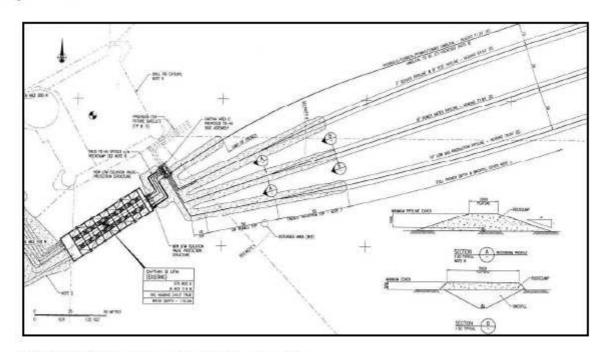
Work on the design of overhead transmission lines, towers, stayed masts, and trussed bridges. Developed computer analysis programs for non-linear analysis of transmission tower substructures, for stayed masts and for other applications.

1964-1967 Sussex River Authority

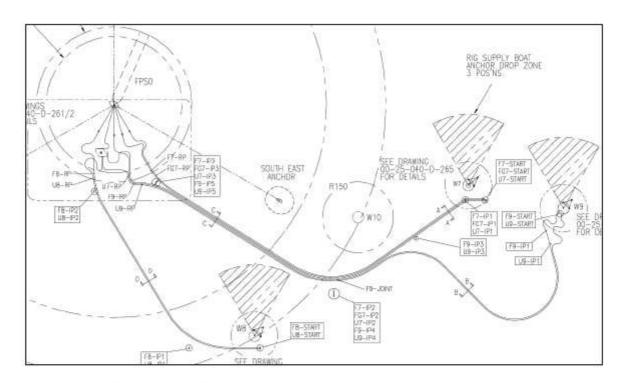
Civil Engineering trainee.

Vacation work plus one full year. Soil sampling and testing, river flow gauging, flood-level survey, river section survey, measurement of earthworks, reinforced concrete design.

Layouts

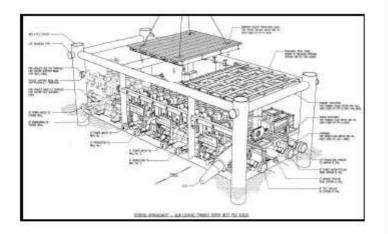


UKCS North Sea layout for field extension.



Laydown of Flexible Flowlines in the Mediterranean.

Manifolds.



Mini-manifold for Captain C.



Interconnection structures between towed pipeline bundles.

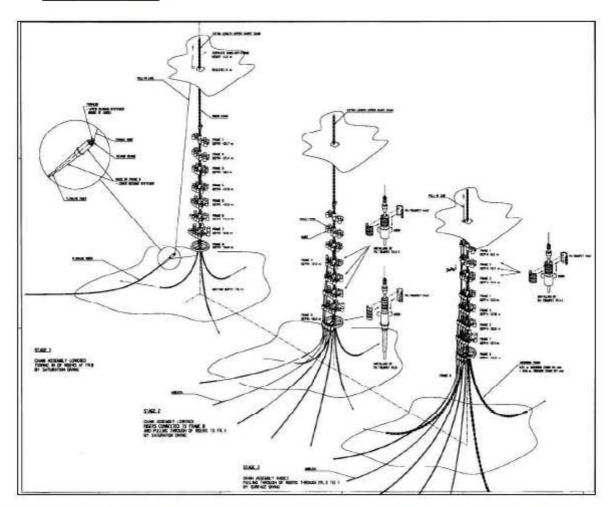


Schiehallion Central Manifold



Howard-Jones A / 2008/ P15 Page No. 9 of 12

Construction











Construction of ISIS TCMS riser system.

Howard-Jones A / 2008/ P15 Page No. 10 of 12

The Proceedings of the Thirteenth (2003) International Offshore And Polar Engineering Conference

International Society of Offshore and Polar Engineers (ISOPE), P.O. Box 189, Cupertino, California 95015-0189 USA

VOLUME II, 2003 CONTENT

Pipelines, Risers And Cable Mechanics Offshore And Arctic Pipelines

Extending the Strain Limits for Reeling Small Diameter Flowlines

Extending the Strain Limits for Reeling Small Diameter Flowlines.

Dr T Sriskandarajah, AL Howard -Jones, AN Bedrossian KBR Pipeline Engineering Group, Springfield Drive, Leatherhead, Surrey, KT22 7NL, England.

ABSTRACT.

The paper discusses the benefit and problems of high strain levels in reeled pipeline applications. Attention is drawn to the important effect that variation in materials and weld properties have upon the strain ranges experienced in the pipeline. It is identified that non-uniformities can be as influential on the maximum level of strains encountered as the radii of curvature inherent to the installation equipment, reels, ramps etc. It is noted that the Coffin-Manson relationship may provide a superior approach to assessment of severity of service to the accumulated strain approach. Working from materials data available from a recent reeled pipeline project observations are reported on the variability of pipeline material properties, and on the importance of the method of load application to the degree of ovalization of pipelines. The paper is supported by finite element analysis to demonstrate the strain concentration effect of connecting pipelines with difference in material properties. The conclusion is drawn that a holistic approach should be adopted for reeled pipeline applications. If effective material, fabrication and lay process controls are in place, significantly higher mean strain levels than 2.5% will be feasible.

KEY WORDS: Pipelines, rigid flowlines, reeling, strain ranges, ovalization, low cycle fatigue, Coffin-Manson

Paper No. 2003-JC-356

	South			-	-						-		
point	SUPPLIER PERFORMANCE								100	REPORT			
PRODUCT / SERVICE DETAILS	1170									11111		=	
Mein Product/Service Codes 3• 0 1• 0 2			3 • 0 1 • 1 6							3 • 0 1 • 9 9			
	muir Subse	a Spor	olpiece	e Instal	llation	Insta	llatio	n Eng	ineering) Desig	n Servic	e	
Delivery Date or Review Period Start Date	20 Feb 2	2006	Revie	w Period		te 🗆			31 Dec	2006	14-55		
		U-	siler EEO,DE	a	100	000 2300	ne		5300,040-51	million	Over		
Order/Contract No (Optional for own see) 5000004613/ KW	607 Value to	10000]	,				Х]			
SCORES													
		_			SC	ORE					Ι.	Т	
ELEMENT	PC	POOR MED			DIOCRE ADEQUATE				EXCE	LLENT	Applicab o	0	
	1	2	3	4	5	6	7	8	9	10	- A	ı	
Product Cuality									X			İ	
Z. Service Quality								Х				Ī	
Project Management									X				
Documentation									Х			L	
5. Planning and Delivery							X			1		L	
6. Suppler Management			-								NA	L	
7. Installation and Commissioning											NA	L	
8. Health and Safety			-								NA	L	
9. Environment		_	-								NA	-	
Skills, Competence and Training Innovation and Improvement			_		_		_	Х				L	
Irmovation and improvement Organisation						_		_	Х	_		-	
13. Facilifies				_					V		-	-	
14. Commercial Management	-		-	_		_	-	X	Х			-	
15. Customer Interfaces	-	-	-	-	-	-	-	^	v	_	-	ŀ	
			_						Х	_			
JOINT AGREEMENT													
Feedback Assessment				Feedback Assessment									
Agreed by Purchaser / Client*				agreed by Supplier									
Client Name: Sonsub Ltd.	(Talisman)			Dompany Name: KW Ltd.									
installation/Localion: Denmore Place, Aberdeen				FPAL Supplier Number: 10044369									
Representative's Name: Alan Edwards				Representative's Name: Adrian Howard-Jones									
Position; Project Manager				Position: Project Manager									
1 M	1					X	1	1	-0	1			
Signature: 12207				Signal	ure:	VE	1	101				_	
CHICAGO CONTRACTOR CON	E-mail: afan.adwarda@soneub.aalpem.ani.it				Date: 08/01/07 E-mail: ahoward-jones@kwltd.com								
Tel No: 01224 357503			Tel No	_				71048					
Completed Decade at 121	rner			1				14110				_	
Completed Reports should be returned to By Fax: 11224 337544	Completed Reports should be returned to FPAL: By Fax: 112M 337544						For Office Use Only					_	
By Parl for First Point Assessment Limited, Performs	nea Feedback Dapa	seli Department,			PF Ink	sket.	Date t	irized)					