

Christopher Robert Clucas
External Consultant

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Qualifications Chartered Engineer
Sheffield, U.K. 1970-3; B.Sc. (Sp.Hons.) - Chemistry
Southampton, U.K. 1978-9; M.Sc. - Cryogenic Engineering

Affiliations Member, Institution of Gas Engineers, London
Member, Institute of Marine Engineering, Science &
Technology, London
Member, Institute of Refrigeration, London
Chairman, IoM Branch of IMarEng (1995-97)
Chairman, IoM Engineering Society (1995-6)

Date of Birth 10 October, 1952

Nationality British

Current Position at CWA

External Consultant.

Summary of Previous Employment

1973-1978 **International Chamber of Shipping (ICS) London**

Secretary of Gas and Chemical Tanker Committees

- Represented shipping industry at many U.K. Government and United Nations (IMO) meetings
- Member of UK & IMO groups which prepared the IMO Construction Codes for both Chemical and Gas ships
- Compiled the I.C.S. Tanker Safety Guide (Liquefied Gas) - the standard industry safety "bible"
- Compiled the ICS Tanker Safety Guide (Chemicals) amendments

- On IMO groups that compiled the chemical & gas training syllabuses for the STCW
- Lectured at a number of training courses
- Published a number of technical papers and spoke at various seminars & conferences

1978

Powell Duffryn Oil & Chemical Storage Co. Ltd.

Joined Powell Duffryn Oil & Chemical Storage Co. Ltd. at their Purfleet depot in Operations, Supervision & Design. The work involved a broad range of terminal & plant activities with a wide range of oils, petrochemicals, liquid gases and chemicals including:

- jetty, road & rail tanker operations;
- product heating & temperature monitoring
- drying, blending & drumming operations
- boiler & steam plant operation & maintenance
- construction, maintenance & survey of pipelines, pumps & valves, steam boilers

1978-1979

Postgraduate Degree studies at Southampton University. In addition to academic work, was seconded to British Gas to assist with the computer-aided design (CAD) of the new L.N.G. plants.

1979-1990

Kosangas

Joined the Danish company Kosangas, based in Copenhagen, as Gas Superintendent with their fleet of LPG tankers. The work involved

- ship inspection
- cargo system maintenance & upgrading; drydocking
- cargo specifications & contamination claims,
- charterparty compliance
- general company safety policy and training of officers.
- superintendent for two Newbuildings
- inspection & trials on four new/s.h. purchases.

In 1982 transferred to the Isle of Man subsidiary company in charge of:

- gas cylinder filling depot
- road transport
- bulk tanker operation (domestic & industrial)
- built two new LPG road tankers and refurbished two s/h units
- also involved with the LPG tank storage and import operations.

Work for Kosan Tankers during this period included gas trials, emergency repairs and contamination claim consultancy.

In charge of gas engineering aspects of the associated towns gas company in Douglas:

- day-to-day supervision of direct & sub-contract labour force;
- introduction of new techniques - productivity increased up to 200%
- ordering stock & spares;
- maintenance of accurate plant records - especially buried pipes;
- a major computer analysis of the pipe network gas flows with extensive trouble-shooting and CAD work to optimise flows.
- extensive upgrading of boosting and pressure governing systems
- arranged various specialist training courses.

1990

Dorchester Maritime, Isle of Man

Part of the world-wide Schulte Group of companies; initially as Gas Projects Manager – appointed Director, Dorchester Maritime LNG Ltd in 2005. Involved with the operation of the 50 gas ships operated by the group in general and day-to-day with the gas ships operated from the Isle of Man. Particular responsibilities include:

- newbuilding plan review, for LNG, Ethylene & LPG ships
- cargo system maintenance and upgrading for existing ships
- cargo contamination claims
- training of sea staff to IMO requirements - courses approved by UK, Liberian, N.I.S. & Polish Administrations
- on-board training courses & Safety Reviews within DML fleet and for third parties
- gas consultancy - including risk assessment & "Expert Witness" commissions
- instructor for special courses aboard LNG/LPG training ship "ANNABELLA"
- presented papers on gas shipping at "Gastech 93" Paris, February 1993, "Gastech 94" in Kuala Lumpur, October 1994, "Ship Repair & Conversion 95" in London, November 1995, "Gastech 96" in Vienna, December 1996, SMi "Understanding LNG Conference" London February 1999, Gas Technology Institute Symposia, London 2002 & 2003, RINA Conference London 2004, IBC Mid-East LNG Conferences Dubai 2003 & Qatar 2004 & 2006, Seatrade Conference London 2005 and Lloyds List LNG Conference London 2007.
- LPG Session Chairman, Gastech 98 Dubai and Gastech 2000, Houston; LNG Session Chairman at Gastech 2002, Qatar, Gastech 2005 Bilbao & Gastech 2006 Abu Dhabi;

- Co-Chair of Chairman of Gastech Conference and the Programme Advisory Committee since 2005
- established Gas Safety Course at the Marine Training Centre, Republic of Kiribati March 1993
- established Gas Safety Courses for a series of new LNG carriers in the UK & for LPG ships in Poland
- conducted Gas Training Course for Surveyors of a Red Ensign-group Flag Administration, an IACS-member Classification Society and the United States Coast Guard.
- Conducted Gas Training for a US Oil Major when they initiated operation of an LPG FPSO, management of 2 off VLGC's and an LNGC – including training sea-staff (classroom & on board) and shore management.
- Conducted Gas Training for several new Owners who were new entrants to LNG ship management – both sea-staff and shore management
- Conducted Gas Training for LNG & LPG Jetty Supervisors for a major Mid-East Gulf client
- attended the Membrane Technology / Construction Course at GTT, Paris
- member of consultancy team advising on major LNG import project into India
- member of consultancy team developing new coastal LNG project
- developed newbuild specifications with Owners for a number of LNGC newbuilds in Korea & Spain
- developed newbuild specifications with Owners for a number of LPG newbuilds in China & Korea
- patented new technology for controlling cargo boil-off on new generation diesel-electric LNG ships.
- member of SIGTTO's General Purposes Committee; Chairman of SIGTTO Panel meetings 2002 – 6.
- member of SICTTO Task Groups on Training Standards for LNGC's and LPGC's, ESD systems, LPG Co-mingling; Fire Hazard Management and Mercaptan Dosing.