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Noise and Vibration in  
Marine Applications  
2nd Annual One-Day Seminar

Wednesday 27 September 2006

Langstone Hotel, Hayling Island  
PORTSMOUTH, UK

Organised by  
TUV NEL, EAST KILBRIDE, GLASGOW, UK  
BOOKING HOTLINE: +44 (0) 1355 272858

Supported by Speakers from:

**BAE SYSTEMS**

**DML**  
GROUP

FRAZER-NASH  
CONSULTANCY

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**NPL**  
National Physical Laboratory

**THALES**

**Wavegen**  
A Voith and Siemens Company

# Noise and Vibration in Marine Applications

## 2nd Annual One-Day Seminar

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### Introduction

The estimated annual turnover in the UK marine equipment industry is £1.7 billion. This is supplemented by £1.8 billion in shipbuilding and repair and £662 million in boat building. The companies which prosper in this sector are those who stay ahead of the competition.

One area of increasing importance for many companies is noise and vibration. Legislation has an increasing impact on business both in relation to environmental issues and to the comfort and safety of passengers and crew - particularly on cruise ships, ferries and leisure vessels. The recent growth in wave and tidal energy devices means that their acoustic impact on the marine environment must also be understood.

Similarly noise, vibration and signature reduction are of fundamental importance in ships and submarines. The measurement, analysis and control of noise and vibration within a marine environment therefore brings unique challenges. Companies who understand, and can deal with, these issues will gain market advantage.

TUV NEL, working in partnership with a number of leading experts in marine acoustics, is hosting a one-day seminar to examine this diverse area. A number of different perspectives will be used to help delegates understand and resolve the issues which are of current concern as well as those which will demand attention in the near future.

### Topics and Themes

Among the themes to be addressed are:

- The identification and control of noise and vibration above, below and in the water

- The generation, transmission and control of fluidborne noise from valves
- Noise and vibration issues on military platforms – ships and submarines
- The control of diesel engine noise
- Issues in underwater acoustics
- Environmental noise including marine energy devices

### Benefits of Attendance

Industry experts will share their experiences of issues which affect a range of marine platforms - from submarines and military ships through to wave energy devices. Delegates will learn about the solutions that are currently being applied and some of the lessons learned during their development.

Best practice will be discussed, future trends addressed and specific opportunities investigated. Given the focused mix of delegates, there will be excellent opportunities for networking.

It is hoped that the outputs from the formal discussion session and informal networking will help shape future development work.

### Presenters

In addition to TUV NEL, presenters will be drawn from experts across a range of sectors and disciplines and will include contributions from:

- BAE Systems
- Devonport Management Limited
- Frazer Nash Consultancy
- NPL
- Thales Naval Services
- Wavegen

### NEL

TUV NEL, part of the TÜV SÜD Group, is one of the UK's leading engineering technology services organisations and is actively involved in noise and vibration measurement, analysis and control.

TUV NEL has an international reputation in key engineering areas, specifically in fluid borne noise, and a world class profile based on over 50 years of solid achievement and experience. TUV NEL's professional and highly qualified staff are complemented by an extensive test, analysis and experimental facility based in East Kilbride in Scotland.

### Who Should Attend

Designers, manufacturers and suppliers of marine equipment, marine engineers and those who have an operational or regulatory responsibility.

### Seminar Fees

The registration fee for the seminar is £415 plus VAT. The registration fee covers delegate attendance, lunch, refreshments and seminar documentation comprising of a bound set of all the papers presented and also a CD containing all the seminar proceedings. Accommodation is not included in the fee.

### Exhibition Opportunities

There will be a small supporting exhibition to accompany the seminar. Suppliers of equipment and services are invited to sponsor and/or exhibit at the seminar. This will give companies a profile in the event documentation in addition to exhibition space during the seminar. Please contact the address on the back page for details.

## Who Should Attend

- Designers
- Manufacturers of Marine Equipment
- Suppliers of Marine Equipment
- Marine Engineers
- Operators
- Managers

## Technical Programme

09:00 – 09:30	Registration and Coffee	12:40 – 13:40	Lunch
09:30 – 09:40	Chairman's Welcome Alistair Mackinnon, TUV NEL Martyn Hart, Ministry of Defence	13:40 – 14:10	Progress in Fishery Research Vessel (FRV) Acoustic Design Hamish Milne, BAE Systems, CS&S Naval
09:40 – 10:10	Diesel Engine Exhaust Noise Kevin Hamson, Frazer Nash Consultancy	14:10 – 14:40	Preliminary Noise Measurements taken on an Oscillating Water Column Wave Power Plant Ken Tease and Janet Lees, Wavegen Dick Whitson, TUV NEL
10:10 – 10:40	Life Under the Flight Deck - Managing Aircraft Noise on the Future Aircraft Carrier Jeremy Squire and Alan Curtis, Thales Naval Services	14:40 – 15:10	Coffee
10:40 – 11:10	Coffee	15:10 – 15:40	The Development of DML's Noise and Vibration Capability Ian Emery and Martyn Kennard, Devonport Management Ltd
11:10 – 11:40	Propulsor Rotor Acoustic Signature Prediction via the Closed Loop Process of Modelling, Testing and Validation Phil Emery and Michael Hutchings, BAE Systems - Submarines	15:40 – 16:10	The Use of PVDF Cable as a Non-Intrusive Measurement Tool Dick Whitson, TUV NEL
11:40 – 12:10	Fluid Borne Noise Issues in Valves Dick Whitson, TUV NEL	16:10 – 16:40	General Discussion
12:10 – 12:40	Underwater Radiated Noise - A Review of Sources and Environmental Effects Stephen Robinson, NPL Dick Hazelwood, R & V Hazelwood Associates Ltd	16:40 – 16:45	Chairman's Closing Comments
		16:45	Close

# BOOKING FORM

Noise and Vibration in Marine Applications Seminar

27 September 2006

Full name (inc. title) \_\_\_\_\_  
Job title \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_ Postcode \_\_\_\_\_  
Country \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
E-mail \_\_\_\_\_

We expect the event to be heavily subscribed. Places are strictly limited and are allocated on a first come, first served basis. Under UK excise regulations delegates from all countries are required to pay VAT at 17.5% on any conference/course taking place in the UK. Your place will be confirmed on receipt of a booking form. If you do not receive confirmation within five working days please contact TUV NEL.

## Method of Payment

(Full payment must be received before the event date).

Delegate rate: £415 +VAT.

A discount is available for group bookings of four or more, received together from the same company. Please contact TUV NEL for details.

- Invoice to company named above
- Cheque, made payable to TUV NEL Ltd, enclosed with this form
- Bank Transfer to National Westminster Bank Plc, 52 West Street, Fareham PO16 0JX.

Account No: 11300175, Sort Code: 52-41-32, Swift Code: NWBKGB2L, IBAN Number: GB26NWBK52413211300175, Account Name: TUV NEL Limited.  
Please advise your bank to include the event code COF189 and the delegate's surname in the transfer instructions.

Company VAT number (EC member states only- COMPULSORY) \_\_\_\_\_

Visa  Mastercard  Amex  Diners Card Start Date \_\_\_\_\_ Expiry Date \_\_\_\_\_

Card No \_\_\_\_\_ Security Code \_\_\_\_\_ (on back of card)

Card Holder's Name \_\_\_\_\_

Signature .....

Address (if different from above) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Where did you hear about this event? .....

## Cancellation Policy

Any cancellations must be received in writing at least 14 days prior to the commencement of the event. A cancellation fee of £150.00 will be incurred. Once within this period the booking cannot be cancelled or any fees refunded, but a substitute delegate can be named at any time before the programme begins, provided that TUV NEL Ltd are notified in advance. TUV NEL Ltd reserves the right to cancel the event due to unforeseen circumstances and is not liable for any expenses incurred by the delegate. This programme may be subject to change due to circumstances beyond the control of the organisers.

## Venue and Accommodation

Accommodation is not included within the delegate fee, please contact the hotel separately to arrange accommodation. The seminar will be held at The Langstone Hotel, Northney Road, Hayling Island, Portsmouth, Hampshire, PO11 0NQ. Tel: +44 (0) 23 9246 5011 Fax: +44 (0) 23 9246 6468 Email: info@langstonehotel.co.uk Web: www.langstonehotel.co.uk

Signed ..... Date .....

### Booking Form

Please complete and return to  
Hazel Hampson, fax back on:  
+44 (0) 1355 272999

TUV NEL  
East Kilbride  
Glasgow G75 0QU, UK

Booking Hotline: +44 (0)1355 272858  
Email: events@tuvnel.com