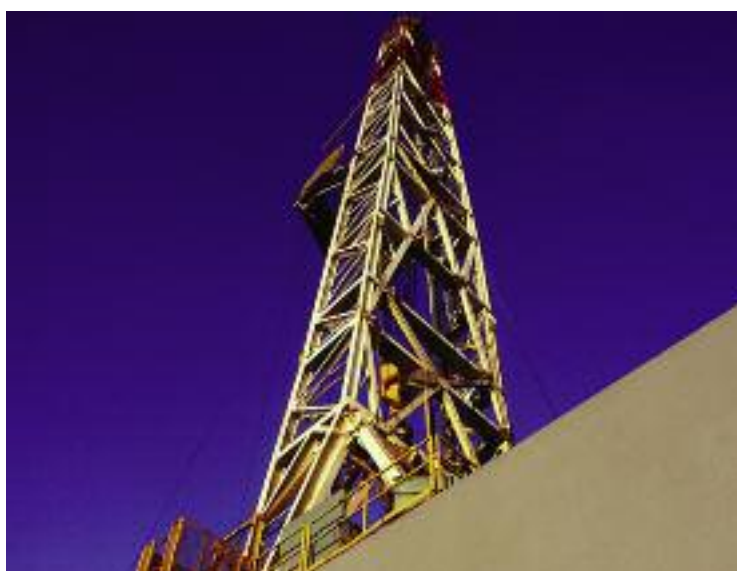




nel
oil & gas services



The Americas Workshop

3 - 5 February 2009

Measurement Uncertainty Training Course

2 February 2009

Ultrasonic Metering Training Course

6 February 2009

The Woodlands Resort & Conference Center,
Houston, USA

Organised by
TUV NEL Ltd, EAST KILBRIDE, GLASGOW, UK
BOOKING HOTLINE: +44 (0) 1355 272858
ONLINE BOOKING: www.tuvnel.com/events.aspx

Committee Contributions from:

- BP
- Chevron
- ConocoPhillips
- Fluor Offshore Solutions
- Letton-Hall Group
- Shell
- TUV NEL
- Weatherford

The Americas Workshop

3 - 5 February 2009

The Woodlands Resort & Conference Center, Houston, USA



Introduction

Drawing on the technical excellence of the long established North Sea Flow Measurement Workshop, the South East Asia Hydrocarbon Flow Measurement Workshop and following the success of the inaugural US-based workshop, the second Americas Workshop will take place on 3-5 February 2009.

This workshop will comprise a series of technical papers, presenting industrial experience and research to a collected audience of engineers, scientists, regulators and policy makers. The workshop will include two supplementary training courses and an accompanying exhibition of technology, making the event a week long forum to help delegates optimise the use of their time. Delegates, who are expected to attend from throughout the Americas, will hear from leading local and worldwide experts on the latest developments and issues within the industry today.

Workshop Background

In a dynamic and economically challenging world of oil and gas production, it is important that information about developments in technology, new regulation and best practice are shared among the practitioners who operate within upstream production and metering.

The aim of this workshop is to bring together operators, regulators, equipment suppliers, engineering contractors, service companies and researchers to share information and experience.

In the same way that the North Sea Workshop and the South East Asia Workshop are unique within their areas, this event will be the only major forum to address the changes in practice and technology which affect North, South and Central America.

The workshop will provide a variety of opportunities for sharing information through:

- formal presentations
- experience based overviews
- facilitated discussion groups
- networking sessions

Workshop Fee

We are offering two types of delegate attendance split to suit those with local commitments and those travelling from further afield.

We expect the workshop and accommodation to be oversubscribed so places will be allocated on a first-come first-served basis.

ATTENDANCE ONLY – This allows delegates to attend on a day only basis, which includes attendance at all technical sessions over the three days, printed proceedings, lunch and refreshments. This delegate registration fee is **\$1300**.

INCLUSIVE – This fully inclusive package includes attendance at all technical sessions, printed proceedings, accommodation at The Woodlands Resort & Conference Center on the nights of 2, 3 & 4 February, all meals (including the Gala Dinner) and refreshments. This delegate registration fee is **\$1995**.

Training Courses

The workshop will be supplemented by two training courses aimed at giving delegates intensive subject based knowledge on either Measurement Uncertainty or Ultrasonic Metering. These training courses are optional and will run independently from the main workshop.

Full details of the training courses can be found further on in this flyer. The delegate registration fee includes participation in the course, lunch, refreshments, certificate of attendance and comprehensive course notes. These notes form useful reference material for delegates to utilise in future.

Please note that accommodation is not included in the training course delegate fees.

Venue

The Woodlands Resort & Conference Center
2301 N Millbend Drive
The Woodlands
Texas 77380, USA
Tel: + 1 281 367 1100
Fax: + 1 281 364 6345

Who should attend:

- Metering and instrumentation engineers
- Production and reservoir engineers
- Hydrocarbon accountants
- Product suppliers
- Metering system vendors
- Government regulators
- Researchers



Registration, Enquiries & Administration

Please complete the enclosed Booking Form and send it by post/fax to the address below. Alternatively you can register online. All enquiries, telephone bookings etc should be referred to the address below:

TUV NEL Ltd
East Kilbride
Glasgow, G75 0QF
UK

Tel: +44 (0)1355 272858
Fax: +44 (0)1355 272999
Email: events@tuvnel.com
Online booking at
www.tuvnel.com/events.aspx

Exhibition and Sponsorship Opportunities

Suppliers of equipment and services are invited to sponsor and exhibit at the workshop. This will give your company a profile in the final programme in addition to a stand at the exhibition. Please contact the address on the back page for further details.

Partners Programme

It is hoped that delegates will use this opportunity to invite their partners or spouses to share in the experience of Houston. For a fee of \$400 delegates who are staying at The Woodlands Resort & Conference Center can share a twin/double room and their partner can participate in all meals as well as participating in the organised programme of events.

TUV NEL

TUV NEL is a leading provider of pipeline fluid management services to the global petroleum industry. We have an impressive track record in the development, design and application of leading-edge technology in order to reduce production costs and increase profitability, whilst maintaining safety. We provide consulting, training, R&D and laboratory testing services in the following areas:

- Flow Measurement (oil, gas, water, wet gas, multiphase & heavy oil)
- Produced Water Systems
- Computation Fluid Dynamics Modelling and Interpretation
- Thermal Engineering & Heat Transfer
- Erosion Assessment and Validation
- Umbilical Acceleration Life Testing
- Calibration in National Test Facility

TUV NEL is part of the TÜV SÜD Group, the leading global technical services organisation for test, certification and consulting in industry with over 13,000 employees, it is represented worldwide at more than 600 locations.

For further details on how TUV NEL can help your business, please visit our website: www.tuvnel.com or contact us directly.

Members of the Technical Committee

The committee have input to the content and direction of the workshop. They have selected papers based on their relevance to industry and the quality of content.

- Dr Brian Millington (Chairman), TUV NEL, bmillington@tuvnel.com
- Mr Tim Daigle, Fluor Offshore Solutions
- Mrs Hazel Hampson, TUV NEL
- Dr Chip Letton, Letton-Hall Group
- Mr Joel Rodger, Weatherford
- Dr Joseph Shen, Chevron
- Mr Gordon Stobie, ConocoPhillips
- Mr Charlie Tyrrell, Shell International E&P
- Mr Robert Webb, BP America



Monday 2 February

- 0830 - 0900 Training Course Registration
- 0900 - 1600 Measurement Uncertainty Training Course
- 1900 - 2100 Workshop Delegate Registration & Welcome Dinner

Tuesday 3 February

- 0830 - 0900 Delegate Registration & Coffee
- 0900 - 0910 Welcome Address
Brian Millington, TUV NEL - UK
- 0910 - 0930 Keynote Speech

Session 1 Multiphase

- 0930 - 1000 BP Alaska Field Test of a Modular Multiphase Metering System
Vijay Ramakrishnan, Daniel Rodriguez and John Lievois, Weatherford - USA
Jerry Brady and Andrew Hall, BP - UK

- 1000 - 1030 Multiphase Metering with Early Detection of Changes in Water Salinity
Øystein Lund Bø, Arnstein Wee and Hans Olav Hide, MultiPhase Meters AS - Norway

1030 - 1100 COFFEE AND EXHIBITION

- 1100 - 1130 Subsea MPFM – Implementation and Lessons Learned
Charlie Tyrrell, Shell International Exploration and Production Inc. - USA
Nikhil Joshi, Moulinex Business Services LLC - USA

- 1130 - 1200 Field Experience on the Performance of a Non-Nuclear Based Multiphase Flow Meter
Robbie Lansangan and Juan Anguiano, BP - USA

1200 - 1330 LUNCH AND EXHIBITION

Session 2 Heavy Oil & Process Technologies

- 1330 - 1400 Anadarko Seeks Better Solution for Plunger Lift Wells
Stephen A. Ifft, Emerson Process Management - USA

- 1400 - 1430 The Influence of Liquid Viscosity on Multiphase Flow Meters
Bruno Pinguet, Schlumberger - France
Gary Miller, TUV NEL - UK
Paul Ove Mosknes, Framo Engineering - Norway

1430 - 1500 COFFEE AND EXHIBITION

- 1500 - 1530 Changing Oil & Gas Fields Operation From Harvest to Process Mode
Joel Rodger, Weatherford - USA
Ron Cramer, Shell Global Solutions - USA

- 1530 - 1600 Multiphase Flow Meter Performance Based on the Combination Venturi and Nuclear Fraction Measurement in Extra Heavy Oil Paradigm (>10000 cP)
Ana Marin, PDVSA - Venezuela
Bruno Pinguet and Onerazan Bornia, Schlumberger - France

1900 - 1930 Pre-Dinner Reception

1930 DINNER

Wednesday 4 February

Session 3 Field Experience

- 0830 - 0900 The Role of Subsea Sampling in Multiphase Metering
Charlie Tyrrell, Shell International Exploration & Production - USA
Nikhil B. Joshi, Moulinex Business Services, LLC - USA

- 0900 - 0930 Maintenance and Surveillance of Subsea MPFM
Charlie Tyrrell, Shell International Exploration & Production - USA
Nikhil B. Joshi, Moulinex Business Services, LLC - USA

- 0930 - 1000 Statfjord Late Life Project Flow Measurement From Study To Start Up
Liv Marit Henne and Jean Monnet, Aker Solutions - Norway
Trond Hjorteland, StatoilHydro - Norway

1000 - 1030 COFFEE AND EXHIBITION



Session 4 Wet Gas

1030 - 1100 Wet Gas Performance of a New Multiphase Meter

Jean-Pierre Poyet, Sébastien Cadalen, Damien Chazal, Pierre-Yves David, Guillaume Jolivet and Nicolas Tranchant, Geoservices Equipments - France

1100 - 1130 Next Generation Clamp-on Sonar Meter for Wet Gas Applications
Daniel L Gysling, Expro Meter, Inc - USA

1130 - 1200 Field Verification of Dualstream II Advanced Wet Gas Flow Meter with a Test Separator
Alistair Collins Solartron ISA – UK
Ian Lightfoot, Solartron ISA
Daniel Borsi and Alberto Perez, Pan American Energy - USA

1200 - 1330 LUNCH

Session 5 Allocation and Proving

1330 - 1400 Subsea Multiphase Measurement Scheme Design for Allocation
Eric Toskey, Amin Amin and Mark Brown, Axio Alliance – USA
Paul Ove Moksnes, Framo Engineering - Norway

1400 - 1430 An Overview of Non-Invasive Flow Measurement Methods
Dick Whitson, TUV NEL Ltd - UK

1430 - 1500 COFFEE AND EXHIBITION

1500 - 1530 An Update on the Concepts of Meter Proving of Ultrasonic Flow Meters
Terence Cousins, Gregor Brown, D Augenstein and B Griffith, Cameron Caldon - USA

1530 - 1600 The Challenge of Well Testing on Old Test Separator
Vijay Kumar, PETRONAS Carigali - Malaysia
Jason Yew, KROHNE Oil & Gas - The Netherlands

1830 - 1900 Pre-Dinner Reception

1900 GALA DINNER

Thursday 5 February

Session 6 Ultrasonic

0830 - 0900 Ultrasonic Flow Meter Recalibration
Gordon Stobie and Angela Floyd, ConocoPhillips - USA

0900 - 0930 Multi-Path Gas Ultrasonic Meter Diagnostics
Klaus Zanker, Letton-Hall Group - USA

0930 - 1000 High Viscosity Hydrocarbon Flow Measurement, A Challenge for Ultrasonic Flow Meters?
Jankees Hogendoorn, KROHNE New Technologies - The Netherlands
André Boer and Jan Drenthen, KROHNE Altometer - The Netherlands

1000 - 1040 COFFEE AND EXHIBITION

Session 7 Heavy Oil

1040 - 1110 Measurement of the Flow Rate of Very Viscous Fluids
Raj S.V. Rajan and Rod K. Ridley, Alberta Research Council - Canada

1110 - 1140 An Investigation into Multiphase Flow Streams Containing a Viscous Oil Component
Neil Barton, Richard Harvey and Gary Miller, TUV NEL Ltd - UK
Bruno Pinguet, Cheng-gang Xie and Andrew Parry, Schlumberger Research - France

1140 - 1200 Closing Comments

1200 CLOSE AND LUNCH

Friday 6 February

0830 - 0900 Training Course Registration

0900 - 1600 Ultrasonic Metering Training Course

Measurement Uncertainty Training Course

Monday 2 February 2009
08:30 - 16:00

Course Introduction

Measurement is fundamental to the control of quality, efficiency and safety. It is vital that all those using industrial measurement recognise that measurement is not an exact science. Understanding the magnitude of the uncertainty associated with any measurement is the first step to improving accuracy. An ability to identify the key issues affecting accuracy is the crucial step in ensuring that limited resources are correctly targeted in any drive to improve accuracy.

This course will introduce delegates to the techniques required to identify what affects measurements and by how much. By ranking the effects delegates will be able to guard against invalid conclusions and ensure that the key measurements are targeted for investment in new instrumentation.

Designed to impart an understanding of measurement uncertainty using examples tailored to the oil and gas sector, delegates will learn the appreciation of the impact of measurement uncertainty on the oil and gas industry, identify the important sources of uncertainty in measurement systems and receive practical guidance on the design of measurement techniques for improved uncertainty.

Course Director

Alick MacGillivray is a Technical Consultant at TUV NEL. He has 21 years experience in a variety of fields, including fluid mechanics, flow measurement, heat transfer and uncertainty analysis. Alick is currently involved in consultancy activities in the areas on allocation, data reconciliation, measurement uncertainty and produced water management for clients in the Oil & Gas and water industries.

Who Should Attend?

- Research and development engineers
- Instrumentation engineers
- Quality managers
- Technical managers

Delegates will also find the answers to the questions such as which are they key meters; which calibrations can be done in-house and which require high accuracy and specialist equipment; and what happens when you replace a broken meter with a spare?

Course Fee: \$630

Ultrasonic Metering Training Course

Friday 6 February 2009
08:30 - 16:00

Course Introduction

Ultrasonic metering technology has matured over the last 10 years to the point where it can be deployed on custody transfer applications. The benefits of the technology are significant but successful selection and application of ultrasonic meters can be challenging. This is a function of a range of manufacturers and models on the market, combined with practical issues such as the performance on the technology in difficult application conditions.

This course will help flow meter users tap into the cost saving benefits of ultrasonic technology and avoid the pitfalls in meter selection and application. It will cover the fundamentals of the technology and the practical issues of application, guiding users on how to employ the technology with confidence that the results obtained will be fit for purpose.

There will be time allowed during the course for interaction between delegates and the course leaders, allowing discussion of specific issues and access to advice on real application problems.

Course Director

Richard (Dick) Whitson is a Principal Consultant at TUV NEL Ltd. and provides the technical lead and backup on projects related to Ultrasonic Flow Metering. Coming from a background in fluid dynamics and acoustics in fluid machinery systems, Dick provides impartial advice and guidance on a wide variety of ultrasonic metering aspects ranging from basic operating principles through to development trends and standards. In addition to being a regular presenter of training courses, Dick sits on BSI ultrasonic flow metering committees and working groups and recently provided a major Annex to ISO/DIS 17089-1 (fiscal and allocation metering of gas) on pressure and temperature compensation of meters.

Who Should Attend?

- Metering Engineers
- Pipeline Engineers
- Production Engineers
- R&D Managers
- Product Sales Engineers

Course Fee: \$630

Please note that the fee includes participation in the course, lunch, refreshments, certificate of attendance and comprehensive course notes. These notes form useful reference material for delegates to utilise in the future. The fee does not include accommodation.

Please complete both sides.

Please copy this form for any additional delegates.

Please tick as required

Workshop

- | | | | |
|--------------------------|---|--|---------|
| <input type="checkbox"/> | Attendance to Workshop Only - Production and Upstream Flow Measurement Workshop (3-5 February) | | \$ 1300 |
| <input type="checkbox"/> | I would like to attend the Gala Dinner on Wednesday evening (4 February) | | \$ 80 |
| <input type="checkbox"/> | All Inclusive – Production and Upstream Flow Measurement Workshop (3-5 February) includes 3 nights hotel accommodation on 2, 3 & 4 February, attendance to Workshop, all meals and refreshments including the Gala Dinner | | \$ 1995 |
| <input type="checkbox"/> | I will be accompanied by a spouse/partner (who does not attend the technical sessions) | | \$ 400 |

His / her name is.....

Additional Accommodation

Inclusive workshop delegates already have accommodation booked for 2, 3 and 4 February. If you require additional bed & breakfast accommodation out with the above dates please contact the hotel directly.

Training Courses

- | | | | |
|--------------------------|---|--|--------|
| <input type="checkbox"/> | Measurement Uncertainty (2 February - accommodation NOT included) | | \$ 630 |
| <input type="checkbox"/> | Ultrasonic Metering (6 February - accommodation NOT included) | | \$ 630 |

Package Booking Reward

- | | | | |
|--------------------------|------------------------------------|------|--------|
| <input type="checkbox"/> | Workshop plus one day of training | less | \$ 100 |
| <input type="checkbox"/> | Workshop plus two days of training | less | \$ 150 |
| <input type="checkbox"/> | Discount for presenting author | less | \$ 650 |

INVOICE TOTAL

\$



Full Name (inc. title) _____
Preferred Name for Badge _____
Job Title _____
Company _____
Address _____

Postcode _____ Country _____
Telephone _____
E-mail _____

We expect the event to be heavily subscribed. Places are strictly limited and are allocated on a first come, first served basis. Your place will be confirmed upon receipt of a completed booking form. If you do not receive confirmation within five working days please contact TUV NEL.

Method of Payment
(Payment by credit card only)

Visa Mastercard Amex Diners Card Start Date _____ Expiry Date _____

Card No _____ Security Code _____ (3 digits on back of card)

Card Holder's Name _____

Signature _____

Invoicing address (if different from above) _____

Company VAT number (EC member states only - COMPULSORY) _____

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 25% 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 is notified in advance. TUV NEL Ltd reserves the right to cancel the event due to unforeseen circumstances. TUV NEL Ltd 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 Details
The Woodlands Resort & Conference Center, 2301 N Millbend Drive, The Woodlands, Texas 77380, USA. Tel: + 1 281 367 1100 Fax: + 1 364 6345 www.woodlandsresort.com

Please complete and return this form to the Events Team,
Fax back on: **+44 (0) 1355 272999**

TUV NEL Ltd
East Kilbride, Glasgow G75 0QF, UK

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

Signed: _____ Date: _____