Index

North Sea Flow Measurement Workshop
21st – 24th October 2008

Technical Programme

Day 1 – Tuesday 21 October

1200	REGISTRATION
1200 – 1400	LUNCH
1400 – 1415	**Welcome Address** Michael Valente, Managing Director, TUV NEL
1415 – 1430	**Keynote Address** Sandy Hay, Consultant
SESSION 1	**Liquid Metering** **Chairman: Richard Paton**
1430 – 1500	**The Importance of Proper Internal Surface and Alignment of Upstream Metering Tubes, When Metering Light Hydrocarbons with Turbine Meter** Steinar Fosse, Norwegian Petroleum Directorate – Norway Bjørn Ullebust and Henning Ekerhovd, StatoilHydro – Norway
1500 – 1530	**API/IP Density Referral Constants – An Investigation into the Impact of Changing From Custom K0 and K1 Values to API/IP Standard Values for the Flotta Pipeline System** David Stewart and Ian Reid, Kelton Engineering Ltd – UK Baron Bennington, Talisman Energy Ltd – UK
1530 – 1600	COFFEE
1600 – 1630	**Infrared Water Cut Meter for Cost Effective Individual Monitoring of Complex Wells** Muhammed Abdul-Rahman Al-Saiyed, Syed A. Warsi, James E. Phillips and Syed Khalid M. Gilani, Saudi Aramco – Saudi Arabia Mazin Zareef and John Lievois, Weatherford International – USA
1630 – 1700	**An Investigation into the Performance of Coriolis and Ultrasonic Meters at Liquid Viscosities Up To 300 cSt** Gary Miller and Bob Belshaw, TUV NEL – UK
1930	DINNER

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Day 2 – Wednesday 22 October

SESSION 2	**Gas Ultrasonics**	**Chairman: Jacek Krawaczynski**
0830 – 0900	**On Line Condition Based Monitoring of USM's** Stephen Peterson and James Trail, Shell Exploration & Production, UK Limited – UK Colin Lightbody, Emerson Process Management Ltd, Daniel Division – UK Lawrence Coughlin, Shell International B.V. – The Netherlands	
0900 – 0930	**Characterizing Ultrasonic Meter Performance Using A Very Large Database** Thomas Kegel, Colorado Engineering Experiment Station, Inc. – USA Richard Britton, Saudi Aramco – Saudi Arabia	
0930 – 1000	**Practical Experiences of Operating Small Bore (4") Gas Ultrasonic Meters for Fiscal Measurement on a FPSO** Craig Coull and Jason Laidlaw, METCO Services Ltd – UK Eddie Spearman, CNR International (UK) Ltd – UK	
1000 – 1030	COFFEE	
1030 – 1300	Poster & Manufacturers Sessions / Clinic	
1300 – 1400	LUNCH	
SESSION 3	**Multiphase**	**Chairman: Alan Downing**
1400 – 1430	**The Influence of Liquid Viscosity on Multiphase Flow Meters** Bruno Pinguet, Schlumberger (Venezuela) – Venezuela Gary Miller, TUV NEL – UK	
1430 – 1500	**Multiphase Flow Meter Experience from a Research Perspective** Feroz Sultan, Duhita Sharma and Aida Azni Zulkifli, PETRONAS Research Sdn Bhd – Malaysia	
1500 – 1530	**Deepwater Measurement Verification – A DeepStar-RPSEA Mandate** Jim Hall and Chip Letton, Letton-Hall Group – USA Bob Webb, BP – USA	
1530 – 1600	COFFEE	

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SESSION 4	**Differential Pressure Flow Metering**	**Chairman: Eddie Spearman**
1600 – 1630	**Diagnostic Methodologies for Generic Differential Pressure Flow Meters** Richard Steven, DP Diagnostics LLC – USA	
1630 – 1700	**The Effect of Drain Holes in Orifice Plates on the Discharge Coefficient** Michael Reader-Harris, David Hodges and Ronnie Rushworth, TUV NEL – UK	
1930	Dinner	

Day 3 – Thursday 23 October

SESSION 5	**Allocation and Computing**	**Chairman: Denis Pinto**
0830 – 0900	**Allocation Computer Systems – Considerations for Vendors and Customers** Richard Alderson and James Arthur, Smith Rea Energy Limited – UK	
0900 – 0930	**Flow Computers & Control Systems Interface or Integrate II** Ben Leach, Swinton Technology – UK Mark Thompson and Mark Skelton, BP CATS Terminal – UK Paul Adamson, Petroplus Teesside Refinery – UK	
0930 – 1000	**Features of Allocation Systems Incorporating Long Pipelines** Phillip Stockton, Smith Rea Energy Limited – UK	
1000 – 1030	COFFEE	
SESSION 6	**Gas Ultrasonics**	**Chairman: James Trail**
1030 – 1100	**Pressure and Temperature Effects for Ormen Lange Ultrasonic Gas Flow Meters – Results from a Follow-Up Study** Per Lunde, University of Bergen – Norway Kjell-Eivind Frøysa, Christian Michelsen Research AS – Norway Vincent Martinez and Øyvind Torvanger, CMR Prototech – Norway	
1100 – 1130	**A General Methodology for Geometry Related Pressure and Temperature Corrections in Ultrasonic Time for Flight Flowmeters** Richard Whitson, TUV NEL – UK	
1130 – 1200	**Installation Effects on the Easington Ultrasonic Fiscal Metering Station** Kjell-Eivind Frøysa and Anders Hallanger, Christian Michelsen Research AS – Norway Anfinn Paulsen, Gassco AS – Norway	
1200 – 1300	LUNCH	

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SESSION 7	**Wet Gas**	**Chairman: Douglas Griffin**
1300 – 1330	**New Correction Method For Wet Gas Flow Metering Based on Two Phase Flow Modelling: Validation on Industrial Air/Oil/Water Tests at Low And High Pressure** Jean-Paul Couput and Géraldine Salque, TOTAL – France Pierre Gajan and Alain Strzelecki, ONERA – France Jean-Luc Fabre, GDF Suez – France	
1330 – 1400	**Liquid Property and Diameter Effects on DP Meter Wet Gas Over-Readings** Charles Britton, Josh Kinney and Richard Steven, Colorado Engineering Experiment Station, Inc. – USA	
1400 – 1430	**Measurement of the Liquid Water Flow Rate Using Microwave Sensors in Wet-Gas Meters: Not As Simple As You Might Think** Hans R E van Maanen, Shell Global Solutions Intl – The Netherlands	
1430 – 1500	COFFEE	
SESSION 8	**Environmental & Uncertainty**	**Chairman: Dag Flølo**
1500 – 1530	**Gas Densitometer Applied for Simple Method in Standard Density Determination – Approach to CO2-Emmission Factor Determination for Fuel Gas** Maron Dahlström, StatoilHydro ASA – Norway	
1530 – 1600	**Handbook of Uncertainty Calculations – Ultrasonic Fiscal Oil Metering Stations** Per Lunde, University of Bergen – Norway Kjell-Eivind Frøysa, Christian Michelsen Research – Norway Svein Neumann, ConocoPhillips – Norway Steinar Vervik, Norwegian Petroleum Directorate – Norway	
1600 – 1630	**Thermal Lagging – The Impact on Temperature Measurement** Sarah Kimpton and Ali Niazi, Advantica Ltd – UK	
1630	CLOSING SPEECH	
1930	PRE-DINNER NETWORKING	
2000	WORKSHOP GALA DINNER	

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Day 4 – Friday 24 October

0800	BREAKFAST
0900	BUSES LEAVE FOR AIRPORT