Steam Quality Testing Seminar

02\textsuperscript{nd} June 2015

Steam Quality Test Seminar

<table>
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<tr>
<th>Time</th>
<th>Topic</th>
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| 08:30 – 10:00 | Welcome - Introductions  
• Steam theory & practice  
• Steam generation  
• Pressure/temperature/enthalpy  
• Temperature/Pressure relationship  
• Pressure/enthalpy curves |
| 10:00 - 10:15 | Refreshments |
| 10:15 - 11:00 | Derivation of Steam Quality Testing/Regulatory  
• Historical (HTM 2010)/EN285 relationship  
• Scope of EN 285:2006  
• Steam quality testing – why  
• Other standards/references USP, ISO, ISPE etc. |
| 11:00 - 12:00 | Impact of steam quality on sterilization processes  
• Getting the overall context  
• Processes that require SQ testing |
| 12:00 - 13:00 | Lunch Break |
| 13:00 - 14:30 | Steam quality theory  
• Non-condensable Gasses  
• Superheat  
• Dryness  
• Required preconditions (design of testing ports etc.)  
• Factors affecting the steam quality (PSG and feed water quality)  
• Equipment required  
• Procedure  
• Important factors / common pitfalls |
| 14:30 - 15:00 | Refreshments |
| 15:00 - 15:30 | Discussion  
• Feedback from participants  
• Experience with test methods |
| 15:45 – 17:30 | Steam Quality test demonstration (in groups of maximum 10-12 person at a time)  
• Demonstration of steam quality test by use of SQ-1 test equipment. |

Keith Shuttleworth biography:
Keith Shuttleworth is the Senior Consultant at Keith Shuttleworth & Associates Ltd, which provides a range of specialist products, consultancy and training services associated with steam quality testing and sterilization processes to an international market. Following a career as an Engineering Officer in the Merchant Navy, he has worked as an engineering manager in the UK’s National Health Service, the pharmaceutical industry and the sterilizer supply and service sector. He has some twenty five years practical experience in the procurement, commissioning, validation and maintenance of sterilizers. Mr. Shuttleworth became a registered Authorized Person (Sterilizers) in October 1994 and is currently a member of the British Standards Institute Committee CH/198 (Sterilization of Medical Devices). He has been Chair of the P&HSS Sterilization Special Interest Group and has been a member of the PDA Taskforces responsible for Sterilizer Validation and SIP Technical Reports (TR1 and TR61). He has provided a wide range of presentations for ISPE, PDA, P&HSS and various commercial training providers, in addition to providing numerous in house training sessions throughout the world (including the UK’s MRHA Inspectors).
Registration Form

Please submit your registration to Scantago not later than 8th May 2015

By e-mail seminar@scantago.com

Last Name: Mr./Mrs. __________________ First name: _____________________________

Title: ______________________________________________________________________

Company: __________________________________________________________________

Street: ____________________________________________________________________

Area code: ___________ City: _________________ Country: _________________

Tel.: ___________________ Fax: ___________________ VAT: ___________________

E-mail: ________________________________________________________________

Fees (payable in DKK): 3,700 DKK (495.- €)

Cancellations warranting a full refund must be received up to 10 working days before the seminar. The full fee will be chargeable for any cancellations received within 10 working days prior to the seminar date. Delegate substitutions may be made at any time prior to the start of the seminar.

Seminar Location:

FARUM PARK Sports- & Konference Center, Idrætsvænget 2, DK-3520 Farum

Steam Quality test demonstration will be held at Spirax Sarco Facility, Blokken 62, 3460 Birkerød. This is approximately 6 km from FARUM PARK Sports- & Conference Center.

Note: Participants are responsible for their own transport from FARUM PARK Sports- & Conference Center to Spirax Sarco.

Payment by

An invoice for payment on participation will be sent approx 2 weeks before the seminar

Please state order reference if applicable.

Cancellation policy:

Scantago ApS reserve the right to cancel the seminar, for want of delegates