

# **18th Annual Produced Water Seminar 2008**

**Houston, Texas, USA  
16-18 January 2008**

ISBN: 978-1-63439-738-4

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2008) by the Produced Water Society  
All rights reserved.

Printed by Curran Associates, Inc. (2015)

For permission requests, please contact the Produced Water Society  
at the address below.

Produced Water Society  
15906 Heatherdale Drive  
Houston, TX 77059

Phone: (281) 480-3087  
Fax: (281) 728-8980

[cctyrie@comcast.net](mailto:cctyrie@comcast.net)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>Surfactant Assisted Oil-in-Water Monitoring</b> .....	1
<i>Dale F. Brost, Joshua Silveira</i>	
<b>Direct Inline Image Sensing of Produced Water to Detect Oil, Solids and Gas</b> .....	25
<i>Tod Canty</i>	
<b>Effect of Surface Wettability on Liquid-liquid Coalescence Filtration</b> .....	50
<i>G.G. Chase, P. S. Kulkarni, K. Moorthy, B. Newby</i>	
<b>Downhole Pump Protection &amp; Desanding Downhole Pump Protection &amp; Desanding</b> .....	62
<i>Steve Coffee</i>	
<b>Oil Sands Breakthrough Using a Novel Reverse Emulsion Breaker Forr SAGD Produced Water</b> .....	81
<i>Alberto E. Franco-Fuenmayor, M. P. Squicciarini, W. J. Suhai, B. R. Young, F. J. Morrison</i>	
<b>Minox Deoxygenation System - Lessons Learned and Upgrades</b> .....	90
<i>Tor Friis</i>	
<b>Measure Twice, Cut Once Measure Twice, Cut Once – The Value of Pilot Studies</b> .....	100
<i>Rick Gaskin</i>	
<b>The Use of Micro Bubble Flotation Technology on FPSO Vessels</b> .....	109
<i>Doug Lee</i>	
<b>Debottlenecking and CFD Studies of High and Low Pressure Production Separators</b> .....	124
<i>Joseph M. Lee, Rafiqul I. Khan, Daniel W. Phelps</i>	
<b>Updates Regarding an Adsorption, Coalescence &amp; Desorption Technology for De-Oiling Produced Water</b> .....	135
<i>M. J. Plebon, Marc A. Saad</i>	
<b>Produced Water Technology Development</b> .....	148
<i>James C. Robinson</i>	
<b>Characterizing the Nature of Solids Production in the Produced Water System</b> .....	158
<i>Ian Smyth</i>	
<b>Use of Dimensional Analysis for Evaluation of Corrosion Inhibitor Effectiveness in Wet Gas Pipelines</b> .....	168
<i>Thomas J. Danielson, Michael W. Joosten</i>	
<b>Produced Water Challenges in Mature Assets</b> .....	186
<i>N/A</i>	
<b>An Update on PetroCAM® Optical-Based Instrumentation for Analysis and Classification of Petroleum Industry Fluids</b> .....	198
<i>Mason Ide</i>	
<b>Effects of Transverse and Longitudinal Baffles in Suppressing Wave Induced Sloshing Motion of A Separator</b> .....	210
<i>Rafiqul Khan, Joseph Lee</i>	
<b>Rotational Phase Coalescing - How to Get More Miles Out of Your IGF or Hydrocyclone</b> .....	220
<i>Paul Schouten, Michiel Arnoldy, Hugo Liebrand</i>	
<b>Online Monitoring at StatoilHydro’s Tampen Operations: An Efficient Tool for Produced Water Management</b> .....	228
<i>Jarle Skeidsvoll</i>	
<b>Why Are Produced Water Discharge Standards Different Throughout the World?</b> .....	239
<i>John A. Veil</i>	
<b>Tracer and Scanning Techniques Utilized for Control of Harmful Discharge</b> .....	258
<i>Scott Vidrine</i>	
<b>Produced Water Unit Operation Optimization Simulation</b> .....	271
<i>Lanre Oshinowo, David Schowalter</i>	
<b>Author Index</b>	