Addressing CRM through Safety-Related Training and Industry Collaboration

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What is essential for building a house?

What is essential for building a SAFE house?
Making the Connection for Competence

- Simulation
- Human Factors & Crew Resource Management
- Technical Skills
- Technical Knowledge
Collaboration Among Industry Organizations

• National Academies of Sciences, Engineering, and Medicine: studying CRM in process safety and worker empowerment in offshore industry\(^1\)

• IADC: Human Factors Conferences and development of new well control course that integrates CRM\(^2\)

• IOGP: 501, 502, 503 documents\(^3\)

• API: new API RP 75 to include human factors

• Energy Institute: Compilation of CRM resources

• IOGP, IADC, API, WCI, SPE, universities
Objectives of Industry’s CRM Efforts

• Integrate technical & non-technical (CRM) training

• Research and publish results on human factors in the context of operations and safety

• Empower rig personnel to speak up

• Develop recommended practices for CRM

• Develop consensus on terms, training content, and best practices.
WellSharp Plus

• Designed for more experienced personnel with a strong foundation of technical knowledge and skills

• Integrates Human Factors (i.e., Crew Resource Management) into the technical training

• Focuses on team-based, simulated case studies
WellSharp Plus

- Addresses the low-probability, high-risk scenarios
- Delivered through facilitation, comprising adult learning and retention principles
- New Instructor Facilitator Course with Human Factors
Crew Resource Management Components

- Situation Awareness
- Communication
- Teamwork
- Leadership
- Performance Shaping Factors
- Decision Making

IADC’s CRM categories align with those provided in IOGP’s 501 and 502 documents.
WellSharp Plus Program/Course

Course Types:

• War Room (for Engineer-level participants)
• Low-fidelity simulation
• High-fidelity simulation
• Combination of the above

Minimum 36-hour course:

• 24 hours of team-based, case-study work
• 8 hours of human factors content
• 4 hours of “debriefing”
• +4 hours for WellSharp® exam (Day 1 or before)
WellSharp Plus Admission Requirements

Available to personnel who have a current, valid WellSharp® Driller- or Supervisor-level Drilling Operations, or similar-level Well Servicing, certificate and are currently involved in drilling or completions operations.

Participants must prequalify by passing the appropriate WellSharp® exam with a score of 80% or higher.
WellSharp Plus Technical Content

Case studies must be appropriate to the trainees’ position and to the WellSharp level each trainee is seeking.

Certain technical types of well control scenarios are required:

Lost circulation
Ballooning
Lube & bleed
Underbalanced
Gas migration
Workover
Robust Instructor Requirements

- Approved WellSharp Supervisor-level instructor
- Successful completion of IADC’s Facilitator Certification course
- Successful completion of IADC’s CRM Train-the-Trainer course

Ratio: 3 to 6 students per instructor, up to 12 with two instructors

Content Delivery: Facilitated learning rather than lecture.
Making the Connection for Competence

Continual Learning and Retention
LEARNING MODEL

Personalized Learning Pathways: The learner’s own strengths, gaps, and passions shape the pathway of retention and continuous learning.

Personal Dashboard
Every learner’s progress and recommended learning pathway is known. This provides the motivation, safety, and confidence that students need to close gaps, discover, and pursue advanced knowledge and skills.

On Demand
Online content and real-world simulation that enhance knowledge and skills.

Advanced Artificial Intelligence
System automation to help identify strengths and areas of improvement to define the learning pathway.

Competency-based Assessment
Continual assessment ensures that learners progress toward mastery of competencies and receive the right level of support to close identified gaps.

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Up Next...Breakout Sessions 3:00pm-3:45pm

1. Beyond Hazard Recognition: Recognizing Hazard Precursors – Charles Simpson, Room 335-A
2. Beyond Traditional Lagging Indicators – Jorge Cortes, Room 335-B
3. Risk Assessments for Drilling and Servicing – Stan Smith, Corey Beacom, Room 335-C
4. In-vehicle Monitoring System (IVMS) Data: An Examination of Patterns of Risky Driving Behavior Among 2,176 Drivers From Eight U.S. Oil and Gas Companies – Kyla Retzer; Dr. Gregory Kushnir, Room 336-AB
5. Applying OSHA’s Walking & Working Surfaces Standards to Field Gas Compression – Joseph Avila, Room 337-AB
6. Preparing the Self for Flow-Based Leadership: Leadership Begins With You – Judith Glick-Smith, Room 339-AB
7. Manganese Exposures During Welding and Hot Work Tasks – Christopher Penniall, Pauline Rotich and William Brown, Room 340-AB
9. Advances in Well Control Training: A Leap Forward in Content, Retention, and Data-Driven Analysis – Mark Denkowski, Room 346-AB
Up Next…Tuesday

Exhibit Hall
- 3:45pm – 6:00pm

CEUs
- Receive 1.3 CEUs (13 hours) for attending conference
- Submit form at Customer Service Desk at the conclusion of the conference

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