Knowledge, Skills, and Abilities (KSA) Project

Purpose

The Knowledge, Skills, and Abilities (KSA) Project is IADC’s major drilling industry project to develop enhanced competency guidelines for rig personnel. Building upon IADC’s existing KSA templates, the competence requirements are being developed for virtually all rig positions (including rig types, environments, geographic regions, and equipment), with priority focus on safety-critical positions that have well control responsibilities.

The Project’s main objective is to provide the tools for confirming proficiency levels of the current drilling workforce, developing competence levels for new entrants, and helping to ensure industry-accepted levels of competency exist when recruiting. In industry parlance, competency is the ability of an individual to perform a job properly—combining knowledge, skills, physical ability, and behavior attributes—as developed through training and experience.

Benefits

- Provides a benchmark for assessing the knowledge and skills of rig personnel.
- Provides a framework to demonstrate compliance with applicable regulations and customer requirements.
- Provides clear minimum standards and guidance for developing training programs for specific rig positions.
- May serve as input into a corporate competence standard.

Deliverables

- Development of KSAs for all remaining rig-based positions.
- Guidelines for performance assessment/methodologies.
- Resources directory.
- Competence template.
- Database to house KSAs and generate personalized competencies based on position, rig type, working environment, etc.

Activities of the Review Teams

Using survey results from the industry, review teams have been working diligently to improve the KSA definitions for the following competency groups:

| Quality, health, safety, and environment | Marine operations |
| Processes and procedures | Technical maintenance |
| Drilling operations – onshore | Facility management |
| Drilling operations – offshore | Regulatory |
| Subsea operations | |

People | Equipment | Processes | Legislation & Regulation | Liability
---|---|---|---|---

Catalyzing Improved Performance

Enhancing Operational Integrity | Championing Better Regulation

Focusing on Members’ Critical Issues
IADC Training & Competence (continued)

Project Status

- Official KSA survey sent out to 110 companies.
- KSA database design drafted and platform selected.
- Worldwide mapping complete, including interviews conducted with various global organizations to gain insight on lessons learned from similar projects.
- Initial KSAs being developed for the following safety-critical positions with emphasis on rig personnel with well control responsibilities: (Goal is 73 positions)

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- Targeted completion: 2013
- Workgroups include Drilling Onshore, Drilling Offshore, Subsea Operations, Marine Operations, Technical Maintenance, QHSE/Process and Procedures, Facility Management, and Regulatory
- Workgroup members have submitted company resource competency line items for group review. The groups have revised competencies as needed and identified each line item competency as a “core” or “additional” competency based on position. This work is going through the final group review before the groups map the competencies for the database.
- KSA database design has been drafted and the platform selected.

KSA Database Example
Workforce Attraction & Development Initiative (WADI) Project

Purpose
The Workforce Attraction & Development Initiative (WADI) Project will address the industry’s urgent need for:
- Prequalified and minimally trained new hire candidates.
- Personal development trajectories and career guidance for new hire personnel and existing rig-based personnel.

IADC, Houston-area colleges, and other training providers are working collaboratively to provide career development pathways based on the KSAs identified by the industry.

Benefits
- Expedite building a qualified labor pool of new employees.
- Provide continuous improvement opportunities for current employees.
- Standardize globally accepted pathways for career development.
- Provide centralized and verifiable records of employee training and certification.
- Reduce cost to contractors through decreased new employee turnover rate.

Deliverables
- Provide in-classroom and online learning opportunities.
- Map positions and KSAs to career paths.
- Complete database development.
- Provide outreach to unemployed or underemployed workers.
- Provide outreach to colleges in the U. S. and internationally.
- Develop programs to educate high school students and veterans on industry benefits.
- Develop a program for employee basic skills and workplace professionalism skills.

Timeline

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Project Status
- Exploratory workshops with community colleges conducted.
- WADI scope and project plan drafted.
- Ongoing discussions among colleges and training providers to align their curricula to IADC KSAs.
Training Committee Activities

Overview

IADC’s Training Committee and the Competence Assurance Subcommittee brought together a group of industry subject matter experts to create a guide for IADC members interested in learning more about competence assurance. In their Competence Guide, the committee addressed the following topics related to implementing a competence assurance process:

- Learning theories, styles, and objectives.
- The language of competence (the value of clear definitions).
- The reasons for investing in a competence assurance program.
- Key elements of a competence assurance program: policies, procedures, key positions and resources, roles and responsibilities, applicable standards, assessments, self-auditing, and the phasing of implementations.
- How to define competencies by position.
- Types and methods of assessment and remediation.
- How to use assessment results.
- Implementing a record-keeping system (data integrity, cost, and system options).
- Tips for making the program successful through executive support, clear communication, project management, and systems for measurement.
- Beneficial resources such as consulting companies, third-party vendors, and government entities.

Program Management
IADC Training & Competence (continued)

Competence Assurance Accreditation Program

Purpose

IADC’s Competence Assurance Accreditation (CAA®) Program seeks to promote the use of accepted practices in ensuring the competence of personnel throughout the oil and gas industry. The CAA® Program assists industry professionals in developing and delivering their own programs using consistent, effective, and well managed processes for achieving employee competence. The Program’s guidelines and recommendations are the road map designed to direct users toward the proper professional approaches for defining, documenting, and implementing their programs. Programs can be either position-based or task-based.

General Accreditation Criteria

- Competence policy and program procedures are defined and implemented.
- Job positions are identified for which employees’ competencies will be assessed.
- Methods of defining competencies are identified.
- Resources are developed to support the competence development process.
- Assessment system is implemented.
- Recordkeeping System is implemented.
- Quality assurance is defined and implemented.

Accreditation Process

Accreditation applicants follow the process below to satisfy accreditation requirements:

1. Application for Accreditation
   - Participating company submits (as a part of the application) detailed job descriptions/tasks, assessment techniques, remediation, resources, and management of their Competence Assurance Program to IADC. IADC staff performs an initial screening for completion of required documents and payment of fees. Once notified that the application has been forwarded for Technical Review, the accreditation process may take from 3 to 6 months.

2. Technical Review
   - Application is assigned to qualified primary technical reviewer, who gauges detail and completion of application, including information on resources, job descriptions, assessments, remediation, and management of the program. Reviewer may require additional information or seek clarification from the company before submitting to the Review Panel. Discrepancies identified in the Technical Review must be addressed by the applicant within 2 weeks.

3. Site Visit (Audit)
   - Site visitors verify the accuracy of information provided on the company’s application and confirm that the program is being implemented and managed as described.

4. Quality Assurance / Quality Control
   - Each Site Visit Report is reviewed by IADC’s QA/QC. If all is not satisfactory, QA/QC may issue a CA or forward the report to the Panel for additional review.

5. Corrective Action (CA)
   - CAs are required when the auditor notes a program non-conformity. The company must identify the cause and extent of the non-conformity, develop a plan, and take steps to rectify the non-conformity. The plan must be submitted to and approved by IADC’s QA/QC within 2 weeks of CA notification. If the plan is approved, documentation and additional information may be submitted to close out the CA requirement within 2 weeks. The entire process shall not take more than 4 weeks, even if the original plan is not approved. If the timeframe is exceeded and/or the CA cannot be closed successfully, then the application becomes inactive, and the applicant may reapply.

6. Panel’s Review
   - The Review Panel assesses the company’s overall competence program and then determines whether to award accreditation or to require further information/development from the company.

Accreditation NOT Granted

Accreditation Granted
Objectives for Individual Programs

- Identify all job titles, categories, and geographical regions/jobsites to which the program applies.
- Define the knowledge and job skills required to be considered “competent” for each position/task.
- Reference the resources used to define the knowledge and skills required for competence in each position/task.
- Provide assessment methodologies to determine the competence of employees filling each identified position/task.
- Reference the resources used to determine the best assessment methodologies for each identified position/task.
- Develop documentation (a competence assurance handbook) that includes all policies and procedures for implementing, maintaining, and managing the program.
- Develop a plan for remediation of employees determined not yet competent.
- Reference the resources used to develop the remediation plan.
- Specify performance criteria that clearly defines the duties for each position/task, assesses skill level for each position/task, recognizes issues that must be reported or addressed, and provides a proper response to observations and measurements.
- Provide a formal statement regarding Management’s commitment to follow the program put in place.
- Adhere to the concepts embodied in the company’s competence assurance program.
- Ensure due diligence in the program’s maintenance.
- Require reporting on the competence of individual employees in a predefined timely and thorough fashion.
- Require the maintenance of accurate, complete records and reports regarding each employee’s competence development and assessment.
- Ensure a process for maintaining confidentiality of records.
- Foster a company culture that values ongoing employee competence.
- Ensure the use of the required methodology for assessing, remediating, and maintaining employees’ competence.
- Ensure a management-of-change process for revising criteria, policies, and processes.

Clearly Defined Terms and Expectations

One of the primary objectives of the CAA® Program involves clearly defining terms, such as the following, related to competence:

- Knowledge
- Skills
- Ability
- Behavioral attributes
- Advanced aptitudes
- Core competences
- Performance criteria
- Assessment systems

Industry Response

Globally, 12 companies have been accredited so far under the IADC CAA® Program. These companies have defined competencies and have been accredited for as many as 60+ positions.

To participate in any of these programs or activities, or for more information, contact IADC at:

+1-713-292-1945

or email Brooke.Comeaux@iadc.org.