

COMPETENCY STANDARDS – WHAT ARE THEY, HOW DID THEY COME ABOUT, AND WHY DO WE NEED THEM?

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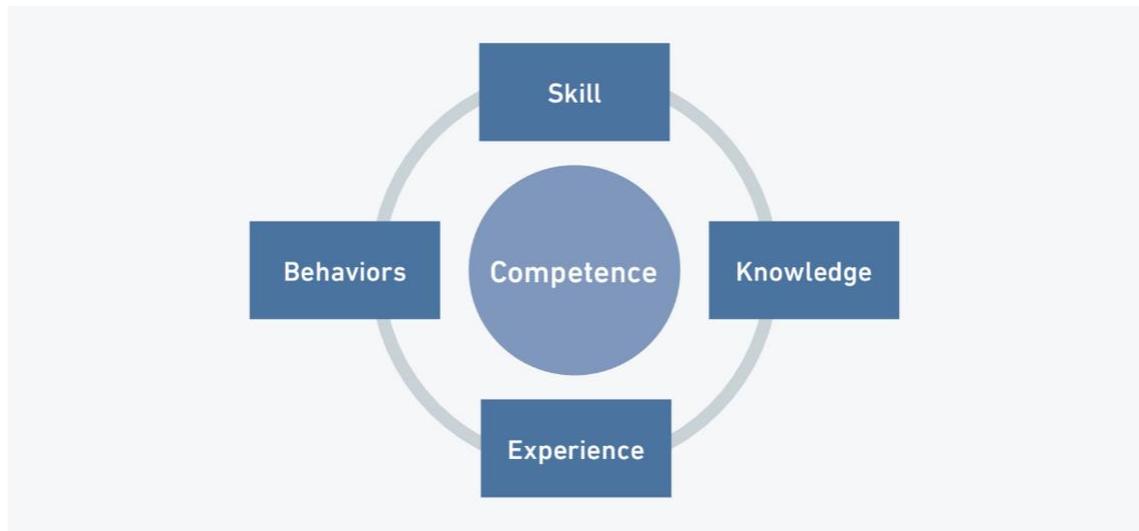
Competency Standards and Qualification Descriptors – What are they?

In a nutshell:

Regulations are necessary and everywhere in the pipeline business; and they consistently state that all our engineers must be both 'competent' and 'qualified' to do their jobs. The problem is... we have little guidance on how to prove our engineers are in fact competent and qualified. It is the same with our standards: most pipeline standards state that all staff working on a pipeline should be competent and qualified to do their jobs, but do not detail or explain how to show this is the case. This means that all companies in the pipeline business must define their own competency standards for engineers. This leads to difficulties: there is no benchmark to compare these standards to, and no agreement on process, nor quality. Time for change?

'Competence' - briefly defined

'Competence' is a combination of skills (the ability to perform a task), knowledge (the ability to understand and explain a task), experience (the type, years, supervision committed to obtaining said knowledge), and behavior.



An individual's competencies are assessed against a so called competency standard. Competency standards provide a common definition of a competency and contain the required skills, knowledge, and experience.

'Qualified' means a competence has been assessed (evaluated). Clearly, to be called qualified in a competency an individual must pass an assessment.

Standardizing competence

The competencies of field operators and technicians are detailed in standards (e.g., the American standard ASME B31Q), but there are no generally recognized competency standards for engineers. The Education Systems and Services group at ROSEN has now begun to fill this gap by creating the *Competency Standards Manual* for engineers, specializing in pipeline integrity management. This manual lists 51 competencies, at various competency levels. Each competency standard consists of:

- An identifier.
- A title (for example, 'Pipeline Inspection and Surveillance').
- A competence level (such as awareness, foundation, practitioner, or expert).
- A basic description of the competency requirements, and the competency gained.
- A purpose/goal of the standard.

- The specific skills and knowledge elements of the competency.
- An outcome which states what the individual with this competency should, know, understand, value, or be able to do once he/she has gained this specific competency
- Any academic or professional qualifications required before this competency can be gained
- Any pre-requisites or co-requisites needed before attempting this competency.
- Any training, mentoring, and/or experience recommended to gain the competency.

The various elements of each competency are described in the manual. Competence levels, for example, are identified to have 4 stages, which include: Awareness, Foundation, Practitioner, and Expert.

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The development of these competency standards took place in conjunction with the so-called Competence Club. An integral element of this club is the collaborative work with the independent qualification panel, which consists of a group of individuals that are all experts in their respective field and all independent from any pipeline operator. This allowed for a more holistic approach when creating the requirements published in the *Competency Standards Manual*. In turn, the Competence Club provides a platform for learning and assessing the defined standards.

Just a heads-up

Of course there is even more to it than the Competence Club and The Competency Standards Manual. These are only building blocks. The 51 competencies can be grouped to create a set of requirements for specific roles within the industry. Taking this one step further, again with the help of the qualification panel, an initial list of six grouped competencies came to fruition – these are called Qualification Descriptors. Each of these descriptors has a dedicated list of competency standards. Up to this point, there has been very little guidance on how to ensure and prove staff are competent and qualified, the Competence Club, Competency Standards Manual, and the Qualification Descriptors are a beginning.