ROLE PROFILE: PIPEFITTING

Occupational Area:	Asset/Site - Pipefitter
Job Role Examples:	Pipefitter, Pipefitter Trade Technician

Role Overview:

The occupation of a pipefitter consists of the positioning, assembly, fabrication, testing, maintenance, repair and dismantling of piping systems. Engineering construction industry piping systems often carry water, steam, chemicals or fuel which may be used in cooling, heating, lubricating and other processes. The piping can vary in bore size and material type dependent upon the fluid it is designed to carry and the operating pressures and environments of these systems. The piping system design will also determine the method of jointing required and the pipefitter must ensure the integrity of joints that are made. Methods of jointing can range from threaded, bolted and clamped solutions to, where required, the preparation of the pipe assembly to enable a more permanent welded joint. Loss of containment through poor jointing may result in machinery and equipment failure, environmental damage or injury/loss of life. A pipefitter is often required to have additional training in other skills to carry out their role effectively.

Knowledge & Skills:

The pipefitter will:

- Have the required competencies to fabricate, position, assemble, test, maintain and dismantle pipework systems to the required standard while adhering to health, safety and environmental regulations and safe working practices and consider areas of environment and sustainability.
- Understand the relevant legislative, regulatory and local requirements or procedures and safe working practices, including their responsibilities with regards to reporting lines and procedures.
- Understand the preparation and reinstatement requirements in respect of the work area, materials and equipment, and the possible consequences of incorrect actions in these areas.
- Read and interpret relevant engineering drawings, related specifications, quality standards and equipment manuals, and to follow work instructions and relevant plans and schedules.
- Understand which tools and equipment to use, and when, and will follow relevant training, methods and techniques and quality control and safety procedures for their use.
- Understand their responsibilities for ensuring the care and security of tools and equipment used.
- Understand the types of defects and testing anomalies that can occur, how to identify them, and what action to take.
- Be able to handle a range of digital information, technology and equipment to support work related tasks and to communicate information.

Technical Competencies:

- **TPF05 - Hot work preparation of welded pipework -** assemble and secure pipework for welding as per specification drawing using cutting and grinding techniques
- **TPF08 - Fabricating and installing pipework supports** - cold form and install pipework supports using bolting and clamping systems including bending techniques
- **TPF10 - Hydrostatic pressure testing of pipework systems** - prepare and hydrostatically test pipework, and then drain the syste
- **TMJI10 - Dismantle, assemble and hand torque flanged joints** - dismantle, inspect flanges and report faults, prepare, assemble and secure a flanged pipework joint as per the specified drawing and within set tolerances
- **TPF11 - Interpret drawing information and assemble threaded pipework** - interpret information from an isometric drawing and produce a full-scale wire representation. Produce, assemble and secure threaded pipework joints using screwed joints, flanges, and fittings from specifications.

Behaviours:

- Establish and maintain effective working relationships, communicate effectively, and work inclusively to deliver work within given specifications.
- Demonstrate team working skills and interact with team members in a positive and professional manner.
- Work within an overall risk control strategy which has been developed by safety specialists and includes detailed criteria for identifying risks, together with clearly defined procedures for action which must be followed.
- Take personal ownership of, and responsibility for, completing tasks and procedures.
- Follow procedures and relevant codes of conduct with integrity and rigour and complete actions and documents accurately and honestly.
- Take responsibility for identifying and reporting instances where procedures or work instructions cannot be met or where a variation in them is required.
- Deal promptly and effectively with problems within their control and report those that have been, and those that cannot be, solved.
- Take responsibility for supervising and mentoring others where appropriate.
- Demonstrate the ability to coordinate work scopes and simultaneous operations (SIMOPs) effectively within a wider team, as required.
- Demonstrate effective handover of responsibility and equipment at the end of a task.
- Take responsibility and ownership of personal development, set targets to plan on how these will be achieved.
- Support operational requirements, achieve targets and maintain records as required, thereby minimising backlog and downtime.
- Maintain compliance with legislative requirements, company policies, procedures and standards.
- Maintain and demonstrate ongoing technical competence and skill set to current standards and updates.
- Support innovation and development for improvements

Determining Work Scopes:

Other categories of workers may be mobilised to complete certain stand-alone activities/work scopes within the pipefitting discipline. Relevant technical tests for those workers are identified below

- Hand torque bolting – Test reference **TMJI10**

Although appropriately qualified for these specific work scopes, it should be noted that without the full suite of pipefitting tests the person should not be deemed as demonstrating full 'currency of competence' across the pipefitting discipline.

SUPPORTING NOTES: PIPEFITTING

The Connected Competence standard role profile for a Pipefitter sets out the knowledge, skills, technical competencies and behaviours that are expected from a fully competent Pipefitter in any sector of the Engineering Construction Industry. Once competence is first achieved through training and subsequent qualification, **regular testing** ensures that **ongoing competence** is maintained, against a recognised standard.

The below information highlights transferable qualifications and any additional technical requirements that maybe specific to a certain sector to support standardisation of skills and workforce transferability. It does not reference any site-specific or sector specific safety training.

Sector Specific Qualifications

Prior to embarking on the formal technical test assessment cycle, an individual would be expected to have core trade qualifications as a minimum requirement:

Key
Accepted - Applicable qualification for the role with no gap analysis required
Recognised - Applicable technical content, however a gap analysis maybe required for appropriate unit completion
Dependant on Employer - May or may not be recognised

Qualification Details	**Offshore Oil & Gas**	**Onshore Oil & Gas**	**Wind**	**Nuclear**
L3 NVQ/SVQ/Diploma/SCQF6 in: Pipefitting; Installing Pipework Systems OR Installing Engineering Construction Plant and Systems – Pipefitting				

Additional Technical Competence requirements

Given the hazardous nature of some Engineering Construction working environments, the overall risk control strategy for the organisation will usually require pipefitters to be familiar with, and work within, a formal Permit to Work system. Compliance with a specific company or site safety management system (SMS) will also usually be required and additional 'site-specific' technical competence will be developed on top of basic technical competence assurance. Specialist safety training may also be required as a prerequisite in addition to role specific training.

Oil & Gas	**Wind**	**Nuclear**	**CCUS**	**Hydrogen**
• MJI10 Stage 1&2 Training	• TPF05, TPF10 and TPF08 not required	• No additional technical competencies	• No additional technical competencies	• SBT04 - Pneumatic testing • Drawing information in TPF11 will be specific to hydrogen gas conditions