

Nuclear Island for M&E and related disciplines

Ideas for discussion



ABOUT THE ENGINEERING CONSTRUCTION INDUSTRY TRAINING BOARD

ECITB Copyright © 2011

The Engineering Construction Industry Training Board (ECITB) is the statutory organisation, national training provider and awarding body with responsibility for the training and development of the UK's engineering construction workforce.

Managing a national skills training fund, the ECITB invests £20 million each year in providing the advice, information and support engineering construction employers need to attract, develop and qualify the people they need to create a sustainable and competitive workforce.

ECITB also sets industry standards for competence and health & safety, and works with all stakeholders to build a sustainable and competitive workforce for the future.

Moving Loads
Welding Pipework
Welding Plate
Non Destructive Testing
Tray Fitting

Constructing Capital Plant Steel Structures – Erecting
Fabricating Steel Structures
Installing and Commissioning Electrotechnical Systems and Equipment (Plant)
Installing Plant & Systems - Instrument Pipefitting
Installing Plant & Systems – Mechanical
Installing Plant and Systems – Pipefitting

CHARACTERISTICS OF NUCLEAR MECHANICAL AND ELECTRICAL WORK

ECITB Copyright © 2011

To provide relevant work experience the activity needs to replicate the *process build* characteristics of a nuclear work site.

These include:

Multi-disciplinary

Mechanical - Pipes, valves, vessels

Electrical – power, instrumentation and control

Components fabricated elsewhere

Minimal on-site manufacture – pipe supports, wiring

Built to nuclear standards and procedures

Includes commissioning and test phase

Other factors – outdoor, complex task, suit different employers and universities, safety and paperwork etc – similar to other work experience.

STEP 1: A STRUCTURE TO BUILD ON

ECITB Copyright © 2011



Picture courtesy of NETA Training Group

STEP 2: A KIT OF PARTS TO INSTALL

ECITB Copyright © 2011



Pictures courtesy of NETA Training Group

SO WHAT MAKES IT A NUCLEAR EXPERIENCE?

ECITB Copyright © 2011

In order to ensure the experience makes a 'nuclear' impact there are a number of key elements:

1. Process being modeled visibly comes from a Nuclear installation
2. Nuclear standards and procedures being used
3. Close employer involvement to make the connection and links between simulation and reality
4. Consistent terminology throughout

BEYOND THE BASICS – SOME OPTIONS

ECITB Copyright © 2011

1. Relocatable rig structure (disassemble, move, reassemble)
2. An enclosed area of the rig designated as a 'containment area'
3. Work with colleges/training providers who have similar rigs to create local experiences
4. Include pre-work – students produce design to same spec as rig design
5. Consider a smaller scale model of a larger part of the process