



This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use, which may be made of the information contained therein.

Learning Resources for the course:

Steel Structure Inspector Course for PED INSPECTOR

This document covers only RPL questions developed in the course, delivery D4.1:

Competence unit no. CU-1 through to CU -9

Table of Contents

Introduction.....	3
Objective.....	3
What do we want to obtain through the RPL questions?.....	3
Mapping the access condition for this course:.....	4
Competence Unit CU1- Question Bank.....	5
C.1 Determine status of prior knowledge.....	5
C.2 Testing prior knowledge-in depth questions.....	6
.....	6
Competence Unit CU2- Question Bank.....	6
C.1 Determine status of prior knowledge.....	6
C.2 Testing prior knowledge-in depth questions.....	7
Competence Unit CU3- Question Bank.....	7
C.1 Determine status of prior knowledge.....	8
C.2 Testing prior knowledge-in depth questions.....	8
Competence Unit CU4- Question Bank.....	9
C.1 Determine status of prior knowledge.....	9
C.2 Testing prior knowledge-in depth questions.....	10
Competence Unit CU5- Question Bank.....	11
C.1 Determine status of prior knowledge.....	11
C.2 Testing prior knowledge-in depth questions.....	12
Competence Unit CU6- Question Bank.....	13
C.1 Determine status of prior knowledge.....	13
C.2 Testing prior knowledge-in depth questions.....	13
Competence Unit CU7- Question Bank.....	14

C.1 Determine status of prior knowledge.....	14
C.2 Testing prior knowledge-in depth questions.....	15
Competence Unit CU8- Question Bank.....	16
C.1 Determine status of prior knowledge.....	16
C.2 Testing prior knowledge-in depth questions.....	17
Competence Unit CU9- Question Bank.....	18
C.1 Determine status of prior knowledge.....	18
C.2 Testing prior knowledge-in depth questions.....	19

Introduction

Note. It is assumed that the teacher has in depth knowledge of the industry requirements for the topics discussed in this CU's.

Reference document covering the course structure, see document D2.2

The RPL questions that have been developed in the course is for mapping the students knowledge and competence for this course.

The answers shall be submitted to the teachers as background information before starting each CU. Based on these answers the teacher may adjust the extent of the teaching for each CU.

The RPL questions will be shared with the students before starting the CU. When using the LMS system in the pilot courses, the questions will appear as the first step in the learning sequence.

The purpose of these questions are strictly for the mapping the students knowledge and competence before starting this course.

The RPL questions have been divided in two classes.

C1. Contains general questions about the knowledge and competence of the students.
There are generally only 3 or 4 question for each CU in this category.

C2. Contains more in depth questions that require that the students in reality know the topics that he/she has answered for the questions under C1. The intention of these questions are to find out if the student really have some more knowledge related to the topics asked about in C1.

Objective.

The objective was to identify the students background for enrolling in the course and to evaluate their background before starting at each CU. The findings are aimed at at defining a status for the knowledge and experience of the students from a teacher perspective. Based on these answer the teacher can adjust the course presentations.

The information obtained through the questionnaires is to allow the teacher to get an overview of the students experience and their own view of the knowledge and competence.

What do we want to obtain through the RPL questions?

The teacher should get an impression on how the student regarded their knowledge at the CU level, through the questions marked C.1 (Determine status of prior knowledge)

But since we know that people have a tendency to exaggerate their knowledge, we added a second row of questions in C.2 (Testing prior knowledge – in depth questions). Through these questions the teacher could get a good impression of the knowledge levels of the students since the questions here are more direct and specific.

Through these answers the teacher could then adapt his/hers course presentation to the level of the students.

At this stage of the course implementation it has not been foreseen that the teacher will give feedback and discuss the results with the students, but this is depending of the teacher.

General comments.

Just before the start of the course itself, a general mapping of the formal education are done. Additional questions are asked about the how long the students have been in active work and a question about the scope of work.

These questions will indicate how fit the student will be for the course and if the student have a minimum background for starting at this course

Mapping the access condition for this course:

1. What theoretical background do you have?

Alternative answers:

1. I have a welders certificate
2. I have a welder technician certificate
3. I am a welding Inspector level B
4. I have other background

2. How many years have you been working?

1. I come directly from school/institute
2. I have less than 5 years of practical work in a workshop
3. I have more than 5 years of practical work in a workshop
4. I have other work experience

3. Have you had work experience from inspection of products before?

1. Yes I have experienced
2. No I have not any inspection experience

4. Have you had control and documentation experience from your own work?

1. Yes, I am used to document the quality of my work
2. No, others have controlled and verified my work
5. Do you have experience in control and documentation of work done by others?

1. Yes I have
2. No I have not

Competence Unit CU1- Question Bank

C.1 Determine status of prior knowledge

1. Quality obligations are an important part of the fabrication process. How do you evaluate your experience and competence in this field?

- I have very good competence in this field
- I have good competence in this field
- I have little competence in this field
- I do not know this field

2. Product liability is a common phrase that is used both for industrial products and for consumer products. Do you know this phrase ?

- I have heard this phrase in an industrial context
- I am not familiar with the phrase and the meaning of it
- I have only heard the phrase for consumer products
- I have heard the phrase in an industrial context. It is only valid for the fabricator, but not for any sub-suppliers
- I do not know

3. We are going to use a Learning Management System, LMS for this course. Do you know such systems?

- Yes I know but do not have experience
- Yes I know and have experience from such systems
- No I do not know such systems

4. We are going to use ZOOM video communication platform in the course. Have you experience from using such systems?

- Yes I know but do not have experience
- Yes I know and have experience from such systems
- No I do not know such systems

C.2 Testing prior knowledge-in depth questions

1. What do you mean by product liability?

- The obligation of the user to use/to apply in accordance with the instructions
- The manufacturers and distributors quality obligations
- There is no obligation after the warranty period
- There is no obligation after the expiration period
- I do not know

2. Do you know the standard EN ISO 3834 ?

- Yes I am using that standard in my work
- No I do not use that standard in my work
- I do not know that standard

3. Have you been uploading files into a LMS system

- Yes I have uploaded text files
- Yes, I have uploaded text and video/picture files
- No I have never uploaded files
- I do not know

4. Have you been using the share folder option in the video communication system?

- I did not know that that option exists
- Yes I have shared files during a communication session
- No I have never used this option
- I do not know

Competence Unit CU2- Question Bank

C.1 Determine status of prior knowledge

1. Have you carried out work descriptions/developed procedures for an inspection plan before?

- Yes, I have have
- No, I have not had such tasks before

2. Have you evaluated the need for training and education in your organization?

- Yes I have created a training schedule
- No, I have not done that before
- I do not know

3. Have you been developing/writing procedures for design verification?

Yes, I have done this
No, I have not done this
I do not know what this topic is

4. Have you been involved in the evaluation of an inquiry before?

Yes, I am always participating in evaluation meetings
No, I have never participated in such meetings
We do not have such meetings in our company
I do not know

C.2 Testing prior knowledge-in depth questions

1. Have you developed procedures for corrective actions?

I do not know what corrective actions means
Yes I have developed such procedures
No I have never developed such procedures
I do not know

2. Training for welding and NDT personnel is carried out by?

In-house training
By certified bodies
I do not know

3. What does PED means?

PED lays down a harmonized rules for marketing of products in EU
It provides a common technical language to access the performance of pressure sensitive products
It creates a declaration of performance
I do not know

4. What is the content in a design review report ?

An evaluation of the design
A description of the inspectors tasks for the design
A verification that the design can be fabricated in the company
I do not know

C.1 Determine status of prior knowledge

1. Have you been working with quality control activities?

Yes, I have been developing procedures, routines and QA plans

I have only been working as a Visual Inspector

I have been preparing inspection activities in the company

No, this topic is new for me

2. Have you carried out design reviews before?

Yes

No

I do not know

3. Have you been developing /writing procedures for design verification?

Yes I have done that

No I have not done that before

I do not know

4. Do you think it will reduce the price of the product if the defect is corrected as soon as possible?

Yes

No

It is not important when it is corrected

I do not know

5. Is it necessary to do supervision during welding?

Yes

No

I do not know

6. Does the marking belong to the Quality Management system?

Yes

No

Sometimes it does

I do not know

C.2 Testing prior knowledge-in depth questions

1. How are the inspection of welded product manufacturing divided?

In order to calculate the profit
Pre, during and after inspection of manufacturing
pre-inspection is not necessary
I do not know

2. Which inspection has priority?

Inspection of welding consumables?
Inspection of welding machines
Decided and significant inspectional variables are at the same level
I do not know

3. Who makes the inspection and testing plan?

It is not important, whoever
The Welding Technologist
The manufacturing manager
I do not know

4. Which material handling belongs to the Quality Management system?

Design
Weld seam identification?
Wrapping, material, transport, warehouse management
I do not know

5. Which details belong to the welding inspection plan?

The age of the welder
Figures, welding process, layers
Welder's list, WPQR, pWPS, WPS
I do not know

Competence Unit CU4- Question Bank

C.1 Determine status of prior knowledge

1. Do you know which documents are belonging to the production inspection?

Yes
No
Partly
I do not know

2. Have you ever fulfilled inspection documentation already?

Yes, in a lot of occasions

Seldom
No
I do not know

3. Can the notified body certificate the pressure equipment?

Yes
No
Only depending on the contract
I do not know

4. Is necessary to make a list for the content of the handover docs?

Yes
No
Not always
I do not know

5. Is there a welder's list belong to the part of the handover docs

No
Yes
Only partly, depending on the contract
I do not know

C.2 Testing prior knowledge-in depth questions

1. Which standard consist of rules about metal product's test certifications?

EN ISO 3834-1
EN 10204
EN ISO 14731
I do not know

2. If you see a test certificate by 2.2 of EN 10204 what the title is of this certification?

Declaration of compliance with the order
Expert's certification
Test report on Quality Identification
I do not know

3. Please, fix one of them the content of the handover docs?

Only non-destructive test reports
Only one of the destructive reports
All docs by a handover list acceptable by purchaser
I do not know

4. What activities do not belong to the customer production control activities?

To check the seller's business plan
Perform day by day production monitoring test

Verification of the implementation docs.
I do not know

5. Which design requirements has to be inspected?

Nothing
According to ISO 8439 ?
The documents are defined by the seller
I do not know

Competence Unit CU5- Question Bank

C.1 Determine status of prior knowledge

1. What are the components of primary costs ?

Essay Question

2. What is the operational factor?

Essay Question

3. What is the quality costs?

Essay Question

4. What is the hourly rate and what is it used for?

Essay Question

5. What does the term defrost power mean?

Essay Question

C.2 Testing prior knowledge-in depth questions

1. What are the main components in the prime cost?

Essay Question

2.What are the operational factor?

Essay Question

3. What are the quality costs and what does it contain?

Essay Question

4. What is the hourly rate and what is it used for?

Essay Question

5. What does the term defrost power mean?

Essay Question

Competence Unit CU6- Question Bank

C.1 Determine status of prior knowledge

1. Do you know what the purpose of non-destructive testing is?

Yes

No

I do not know the expression

2. Do you know the types of non-destructive testing ?

Yes

No

I do not know

3. Do you know what abnormalities can be detected by liquid penetrant testing?

Yes

No

I do not know

4. Do you know the applications of visual inspection

Yes

No

I do not know

C.2 Testing prior knowledge-in depth questions

1. Do you know the purpose of Destructive Testing?

Yes

No

I do not know

2. Do you know the different types of Non-Destructive Testing?

Yes
No
I do not know

3. Do you know what abnormalities that can be detected by Liquid Penetrant Testing?

Yes
No
I do not know

4. Do you know the application for Visual Inspection?

Yes
No
I do not know

5. Do you know what Magnetic Crack Detection can detect?

Yes
No
I do not know

Competence Unit CU7- Question Bank

C.1 Determine status of prior knowledge

1. Do you know the purpose of Destructive Testing?

Yes
No
I do not know

2. Do you know the classification of Destructive Testing?

Yes
No
I do not know

3. Do you know the purpose of metallographic tests?

- Yes
- No
- I do not know

4. Do you know the purpose of technological tests?

- Yes
- No
- I do not know

5. Do you know how material testing is grouped?

- Yes
- No
- I do not know

C.2 Testing prior knowledge-in depth questions

1. The impact strength is a characteristic of the toughness of the material that depends on?

- Temperature, thickness and impact velocity
- Temperature and operating conditions
- Radius of the notch, temperature and thickness of the test specimen
- I do not know

2. The Impact test is suitable:

- To determine the stress generated when the material breaks
- The ductility of the material
- To determine the hardness in the heat affected zone
- To determine the toughness of the weld
- I do not know

3. The bend test provides information on:

- The ductility of the joint
- The strength of the joint
- The structure of the weld
- The behavior of the material
- I do not know

4. Do you know how material testing is grouped?

The specimen was incorrectly removed
The joint was not strong enough
I do not know

5. Which field test can be used to simply conclude that the weld is adequate?

X-ray examination
Hardness test
Ultrasonic examination
Macroscopic examination
I do not know

Competence Unit CU8- Question Bank

C.1 Determine status of prior knowledge

1. Do you think surface protection is important for a metal product?

No
It is important for steel
Yes
I do not know

2. Have you heard of size regulation?

Yes
No
Our company is using none
I do not know

3. Can coating be a problem?

No
It is certainly not a problem
Yes, but depending on the material
I do not know

4. What is the indication if the weld joint in the base material has ruptured during tensile

test?

The specimen was incorrectly removed
the joint was not strong enough
I do not know

5. What about temporary surface protection? Will that be needed ??

Yes, usually that is needed
No, we never use that
I do not know

C.2 Testing prior knowledge-in depth questions

1. List the basic tools and procedures used for dimensional control?

Control plan and visual inspection instruments
Control plan and dimensional control procedures
I do not know

2. What do you mean by pressure vessel and list its main features/characteristics?

Essay question

3. List the basic stresses on the pressure vessels,

Essay question

4. What is the pressure test and explain its purpose,

Essay question

5. What does the CE marking mean

Essay question

Competence Unit CU9- Question Bank

C.1 Determine status of prior knowledge

1. Do you know what does handover documentation mean?

No

Yes

I think I know what this means

I do not know

2. Do you know what does closing documentation mean?

Yes

No

I think I know this expression

I do not know

3. What does a contractor's declaration mean?

I know this expression

Yes I have been working with contractor's declaration

I have never heard this expression

I do not know

4. Are you used to prepare a closing documentation?

I have experience from preparing closing documentation

I have made product documentation

I have created product reports

I do not know

5. Do you have knowledge on all the inspection activities?

I have extensive knowledge

I have limited knowledge about the inspection activities

I do not know

C.2 Testing prior knowledge-in depth questions

1. What is the content of a closing documentation?

Drawings, certificates, welders list, inspection and testing documents

Overview of company structures

A set of welders curriculum

I do not know

2. What is the content of a handover documentation?

The closing documentation is enough

The closing documents and what is defined in the contract

The contractors declaration of conformity

I do not know

3. The contractor's declaration is a?

Written documentation

Oral agreement

I do not know

4. What is the term "as built"?

The plan created by the designer

The ready production plan

A draft plan for production

A documentation of what has been done and reported

I do not know

4. Who inspects the handover documentation?

The technical director

The Inspector

The welding engineer

I do not know