



UNIVERSITI KUALA LUMPUR
Malaysia France Institute

FINAL EXAMINATION
SEPTEMBER 2014 SESSION

SUBJECT CODE	: FWB32703
SUBJECT TITLE	: WELDING PROCEDURE CONSTRUCTION
LEVEL	: BACHELOR
TIME / DURATION	: 3.00 PM – 5.30 PM (2.5 HOURS)
DATE	: 9 JANUARY 2015

INSTRUCTIONS TO CANDIDATES

1. Please read the instructions given in the question paper **CAREFULLY**.
 2. This question paper is printed on both sides of the paper.
 3. Please write your answers on the answer booklet provided.
 4. Answer should be written in blue or black ink except for sketching, graphic and illustration.
 5. This question paper consists of **TWO (2)** sections. Answer **ALL** questions in Section A and Section B.
 6. Answer all questions in English.
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THERE ARE 2 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)

ANSWER ALL QUESTIONS.

1. What is a Welding Procedure Approval Record? Explain briefly. (10 marks)
2. What is a Standard WPS? (10 marks)

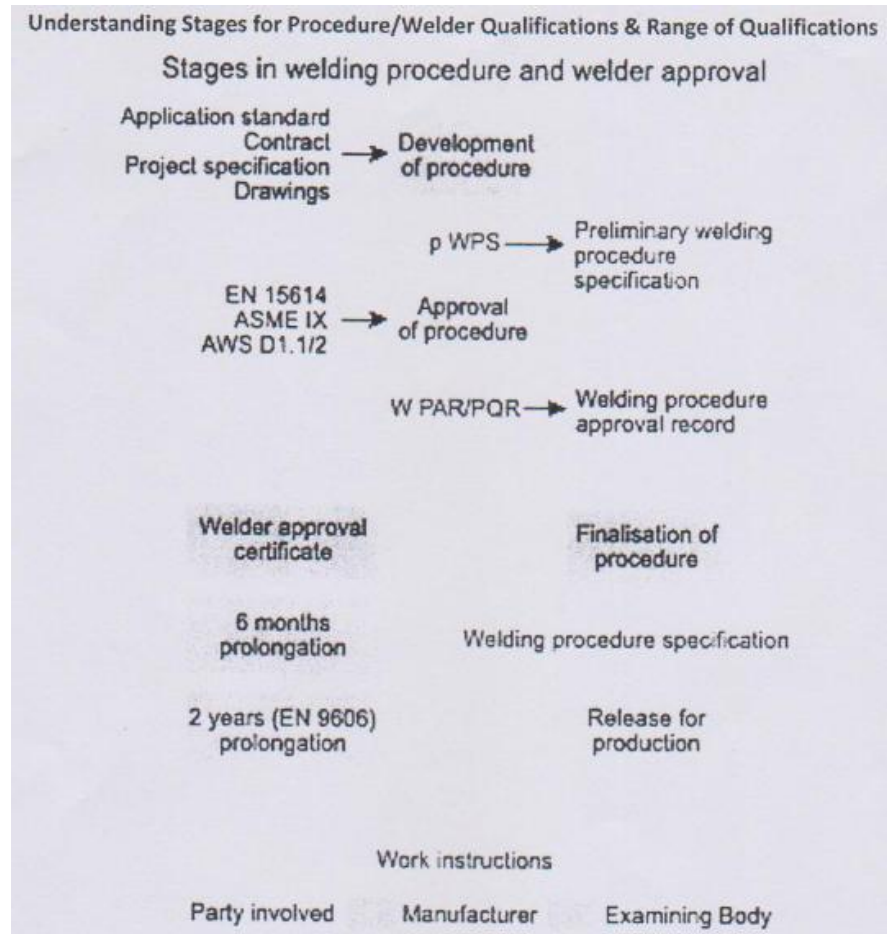


Chart 1 - Procedural & welder performance Test

3. The above Chart 1 shows a flow process chart in regards to Procedural and welder performance test.

Please explain each steps involved until the release of the WPS for production.

(20 marks)

SECTION B (Total: 60 marks)**ANSWER ALL QUESTIONS**

Please use the answer booklet provided.

1. List down the steps undertaken in a “Welder Performance Test”.

You are to provide a flow process chart to support your answer.

(15 marks)

2. What is the difference between a Welding Procedure Specification (WPS) and a Procedure Qualification Record (PQR)?

(15 marks)

3. What is an “Essential Variable” in a welding process?

Give four examples of essential variables in the SMAW process.

(15 marks)

Table 7 — Range of qualification for pipe and branch connection diameters
Dimensions in millimetres

Diameter of the test piece D^a , mm	Range of qualification
$D \leq 25$	$0,5D$ to $2D$
$D > 25$	$\geq 0,5D$ (25 mm min)
NOTE For structural hollow section D is the dimension of the smaller side.	
^a D is the outside diameter of the pipe or outside diameter of the branch pipe.	

Table 1. Range of qualification

4. The above table shows the range of qualification for welders in the welding of pipe and branch connection.

Please refer the above table and answer the following questions:

- If a welder is tested for pipe diameter $D \geq 25$, what is the range of qualification that he is qualified? Explain briefly.
- If a welder is tested for pipe diameter $D > 25$, what is the range of qualification that he is qualified? Explain briefly.

(15 marks)

END OF QUESTION