

Total No. of Pages : 1

Register Number :

7858

Name of the Candidate :

DIPLOMA EXAMINATION DECEMBER 2013.

(WELDING ENGINEERING AND TECHNOLOGY)

140 — WELDING METALLURGY AND WELDABILITY TESTING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Explain in detail about heat flow in welding.
(b) Discuss various heat treatment methods.
 2. (a) Explain in detail about the weldability of carbon steels.
(b) Briefly discuss problems occurred while welding duplex stainless steels.
 3. (a) Explain in detail about difficulties found in welding of copper and its alloys.
(b) How do you define welding procedure? Why it is important to draw up welding procedure before the welding is carried out?
 4. (a) Write down the factors which may promote hot cracking. Explain reheat crack.
(b) Explain in detail about the stress relieving techniques.
 5. (a) Explain murex test and vareststraint test.
(b) Describe in detail about controlled severity test.
 6. (a) Write short notes on various microstructure produced in weldments.
(b) Briefly discuss about problems occurred while welding Q & T steels.
 7. (a) Briefly discuss about significance of Schaffler diagram.
(b) Write about various service weldability tests. Explain any two.
 8. (a) Explain the basic steps involved in eddy current testing.
(b) What are the different types of NDT testing? Explain radiography testing.
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