

CHAPTER-8

Machine Design

1. Bolted, Riveted & Welded Joint

- In a single V-butt welds, the angle between edges is kept about:
 - 20 to 40°
 - 40 to 60°
 - 70 to 90°
 - 10 to 20°

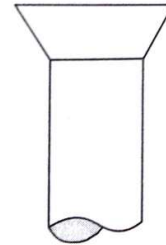
[SSC-JE: 2012]
- The thickness of a boiler plate is 16 mm, the diameter of rivet used in the boiler joint is-
 - 24 mm
 - 28 mm
 - 10 mm
 - 20 mm

[SSC-JE: 2012]
- The shear strength, tensile strength and compressive strength of a rivet joint are 100N, 120 N and 150 N respectively. If strength of the unriveted plate is 200 N, the efficiency of rivet joint is :
 - 60%
 - 75%
 - 80%
 - 50%

[SSC-JE: 2012]
- The shearing strength of a rivet in 50 N/mm². If the diameter of the rivet is doubled, then its shearing strength will be :
 - 100 N/mm²
 - 200N/mm²
 - 50 N/mm²
 - 300 N/mm²

[SSC-JE: 2014(E)]
- Rivets are generally specified by-
 - Diameter of head
 - Thickness of plates to be riveted
 - Length of rivet
 - Nominal diameter

[SSC-JE: 2014 (M)]
- The rivet head for general purpose shown in the figure below is



- snap
 - pan
 - countersunk
 - flat
- [SSC-JE: (Afternoon) 1.3.2017]
- A backing ring is used in the pipe joint when making a _____.
 - Butt weld
 - Fillet weld
 - Sleeve weld
 - Socket weld

[SSC-JE: (Afternoon) 1.3.2017]
 - If the tearing efficiency of a riveted joint is 60% then ratio of rivet hole diameter to the pitch of rivets is
 - 0.2
 - 0.33
 - 0.4
 - 0.5

[SSC-JE: (Afternoon) 1.3.2017]
 - A riveted joint may fail due to:
 - Shearing of the rivet
 - Shearing off the plate at an edge
 - Crushing of the rivet
 - only A
 - only B
 - only C
 - Any of A or B or C

[SSC-JE: (Afternoon) 1.3.2017]
 - The horse power transmitted by a belt is dependent upon
 - tension on tight side of belt
 - tension on slack side of belt
 - radius of pulley
 - speed of pulley
 - only A and B
 - only B and C
 - only D
 - A, B, C and D

[SSC-JE: (Forenoon) 2.3.2017]