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ENGINEERING DESIGN

HANDBOOKS APPLICATIONS

N Certified University

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Lesson 21

Date. _____

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Schedule in single storey
Test book

Schedule in single
storey

Building design
construction handbook

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American Electrician
Handbook

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Electrical Schedule

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Page 4 - Filled weld (Fig 1)

Fig 2 Transverse filled



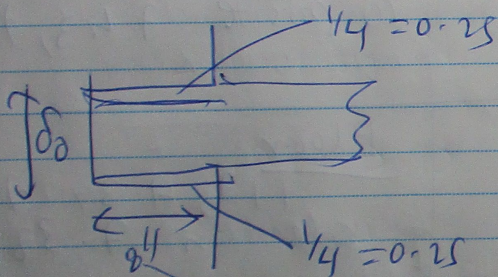
Date. _____

Page 6

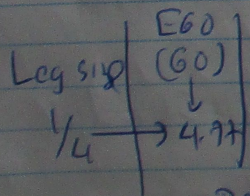
Table 2 - Electric strength

Page 7

Design strength = $\frac{1}{2}$ Tmch
 Yield strength 36 ksi E60



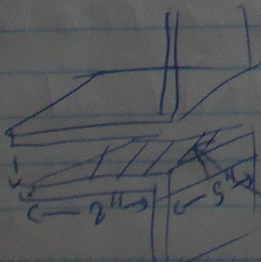
Throat Thickness = $0.707 \times (0.25) = 0.177$
 Weld capacity Table 2 - Page 6



$$\text{Capacity} = 4.72 \times (2 \times 8) = 76.32 \text{ kip}$$

$$\begin{aligned} \text{Design capacity} &= \phi F A_g \\ &= 0.90 \times 36 \times \left(\frac{1}{2} \times 2\right) \end{aligned}$$

↑ ↑
comical Yield strength



Date. _____

Circular fillet

Page 9. - DO Pb 3

Shear Bending Loading

$$\text{Page 11 } f = \frac{F}{2L}$$

$$\text{Bending } f = \frac{2.25 f e}{L^2}$$

DO - Pb 4

Table 3 Page 11 welded pattern.

Table / formula

Look Page 16, P 17

P-20 Structural Angle.

Reference Textbook

Applied welding Engineering

Chapter 2 - Alloys to Page 7
Page 10Corbodiagram Page 30 Fig 1.4.4
Page 53 - Classification of steel Table



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Application Page 56

See Chapter 7 - Cast Iron PSB
Stainless steel - Chapter 8 PG
Production P 62
Non ferrous P 71 Chapter 9

Page 103 - welding Procedure
Chapter 1
109 → 110

Physics of welding Page 111
overall explanation
Read details

Welding Joining Process Chapter 3
Page 143

Joint design P 152 / 153
Temperature gradient P 169 + 170

PA1 - Stress / Shrinkage
Distribution

Butt weld P 176 + 179



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Lesson 3

Test Book

CE Sample construction schedule
EE H - Electrical Service Design Report
ME machine Design Project

Comparative
Building vol 1/2
Find relevant
class

Additional
Design of Grounding ← Earthing
Grounding
System
Find relevant
topics
content

Read
Practical Power Protection

calculation / Refer to calculation
of machine design
Find the topics
and concepts relevant
to Design Projects.

For example

ch 8
machine
Assembly

Redal powered water Purifier Project
SPRING → see other page

Chapter 1
Fundamental
loadings.

component - container
filter
Heating - 9.2.3 work
Energy
upper pipe
Fan

maine motion
Chapter 10
10.2



Calculation of machine Design Test book.

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Chapter 9

9.2 Helical
Spring

