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<tr>
<td>21/11/06</td>
<td>First draft</td>
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<td>09/04/14</td>
<td>2.0</td>
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Module 4 – General Sheet Metalwork

Unit 13 – Off-Centre Rectangle to Round

Duration – 10.5 Hours

Learning Outcome:

By the end of this unit each apprentice will be able to:
- Organise the production sequence
- Construct and fabricate an off-centre rectangle to round
- Calculate material requirements for pattern development
- Assemble and fit a kit form flange to transformer
- Identify different developed pattern shapes

Key Learning Points:

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<tr>
<td>D</td>
<td>Drawing and development of an off-centre rectangle to round.</td>
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<tr>
<td>Sk</td>
<td>Shaping and forming of transformers left and right sides.</td>
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Training Resources:

- Toolkit
- Propriety flanging
- Safety equipment and protective clothing
- Tools and machinery/equipment
- 0.6mm galvanised mild steel
- Notepad
- Job card

Key Learning Points Code:

M = Maths     D = Drawing     RK = Related Knowledge
P = Personal Skills     Sk = Skill     H = Hazards
Figure 1 - Off-Centre Rectangle to Round
Self Assessment

Questions on Background Notes – Module 4.Unit 13

1. What is the “Golden Rule” of triangulation?

2. What is the area of the round pipe?

3. What is the circumference of the pipe?
4. What is the area of the rectangular end?
Answers to Questions 1-4. Module 4.Unit 13

1.

Plan length against the vertical height of the job: We place the plan length at 90° to the vertical height and measure, the resulting diagonal is the true length.

2.

The formula for area is $\pi R^2$

$$3.142 \times 75 \times 75 = 17673.75 \text{mm}^2$$

3.

Formula for circumference is $2\pi R$ or $\pi D$

$$2 \times 3.142 \times 75 = 477.3 \text{mm}$$

or

$$150 \times 3.142 = 477.3 \text{mm}$$
4.

Area of rectangle is $L \times B$

$250\text{mm} \times 350\text{mm} = 87500\text{mm}^2$
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