

Worksheet 4-070: Forming a cable tray reducer

NB: Students must not attempt this exercise before the correct use of all tools and materials has been demonstrated.

Technical data

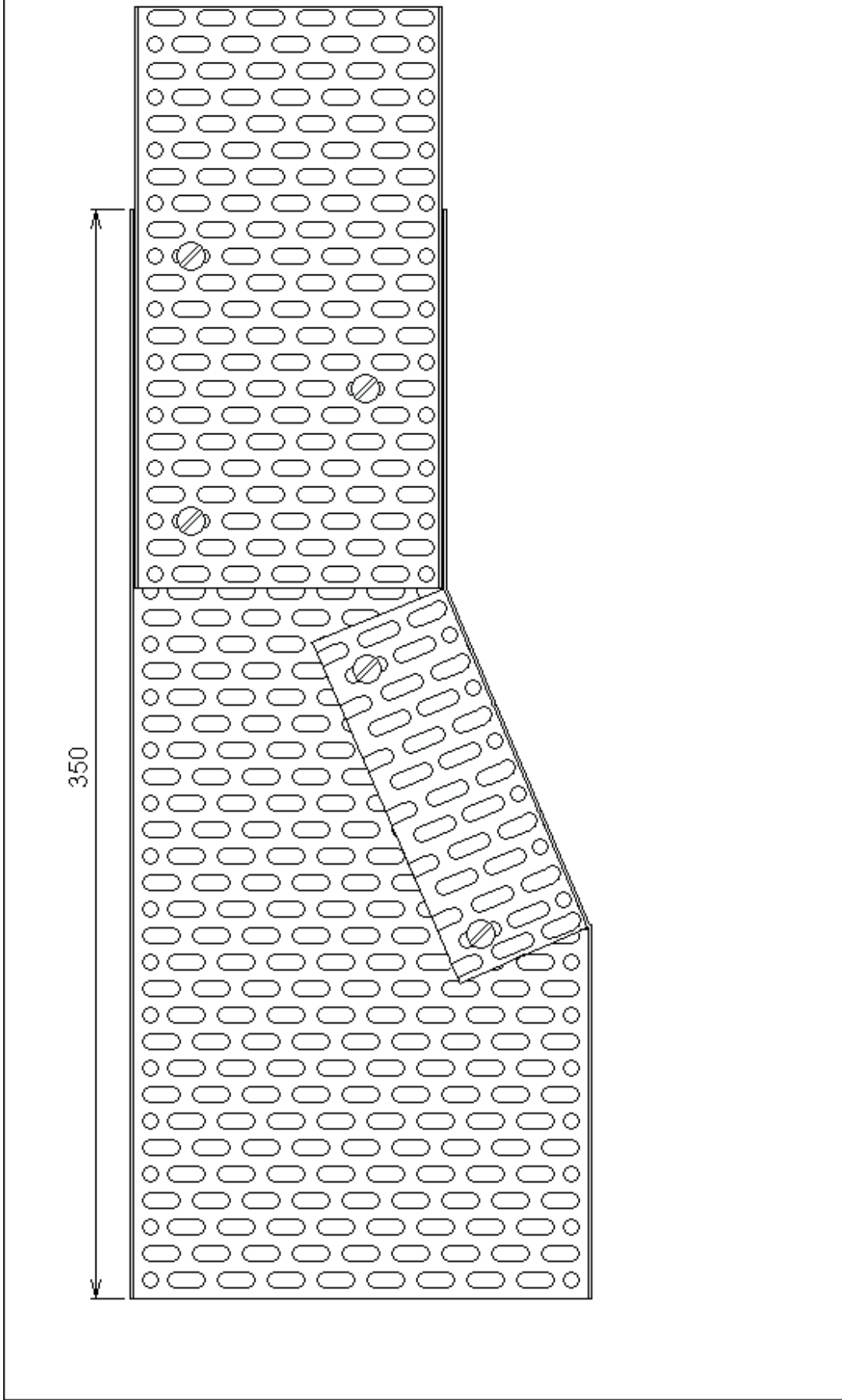
- You are to make sure that your work area is clear and safe for work to proceed.
- You are to make sure that all your work conforms to the requirements of the Health and Safety at Work Act.
- Ensure that the cable tray is not cut across the slots.
- Ensure that all edges are deburred.
- Use only pencil to mark dimensions on the cable tray.
- The work area must be restored to a satisfactory condition on completion.

Material required

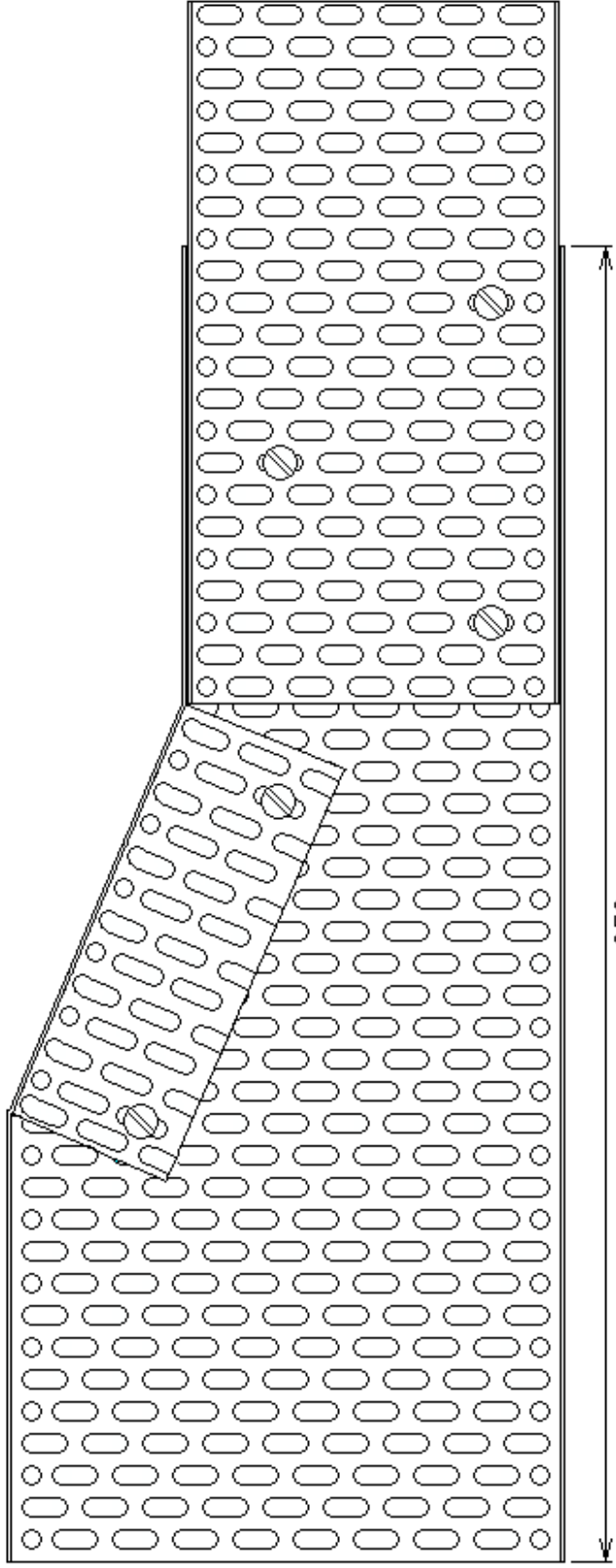
400mm	Metal cable tray 150mm wide
5 off	M6 x 12mm pan head steel set pins
5 off	M6 steel nuts

Procedure

1. Enter the start time on the assessment sheet.
2. This reducer may be either left- or right-handed; check with the Lecturer which 'hand' you should make.
3. Prepare the material requisition.
4. **Have the requisition checked before proceeding.**
5. Obtain the material stated from the stores.
6. Mark square and cut one end of the cable tray, taking care to meet the requirements of the technical data.
7. From the squared end mark lines at 130mm and 250mm.
8. Mark a line 50mm from and parallel to one flange (which one depends on whether a left- or right-hand reducer is to be produced) from the squared end down to the 250mm, as shown during the demonstration.
9. **Have work checked before proceeding.**
10. Cut along the 50mm marked line down to the 250mm marked line.
11. Cut the 50mm down to the flange edge at both 130mm and 250mm lines but **DO NOT CUT THE FLANGE EDGE**.
12. Fold the 50mm section across the 100mm section and, using M6 pins and nuts, fix in such a position that the 100mm cable tray will fit inside, as shown in the diagram.
13. Mark and cut so that the overall length of the reducer is 350mm.
14. Remove any burrs and sharp edges and recheck dimensions.
15. **Hand the work to the Lecturer for assessment.**
16. Enter the finish time on the assessment sheet.
17. Restore the work area to a satisfactory condition.



TITLE		
Forming a Cable Tray Reducer (Left)		
Dimensions in Millimeters	Target Time	150 mins
Scale N.T.S.	Task 4/080a	



TITLE	
Forming a Cable Tray Reducer (Right)	
Dimensions in Millimeters	Target Time 150 mins
Scale N.T.S.	Task 4/080b

Assessments are based on **observed** safety procedures, and the **quality** and **accuracy** of the completed exercise.

		YES	NO
1.	Material requisition correct first time	<input type="checkbox"/>	<input type="checkbox"/>
2.	Method statement completed	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
3.	Wore appropriate PPE	<input type="checkbox"/>	<input type="checkbox"/>
4.	Acquired the correct materials and equipment	<input type="checkbox"/>	<input type="checkbox"/>
5.	Correct position of line marked at 130mm	<input type="checkbox"/>	<input type="checkbox"/>
6.	Correct position of line marked at 250mm	<input type="checkbox"/>	<input type="checkbox"/>
7.	Correct position of 50mm line parallel to flange	<input type="checkbox"/>	<input type="checkbox"/>
8.	All marking out in pencil (tray surface undamaged)	<input type="checkbox"/>	<input type="checkbox"/>
	Assessed by:		
9.	Tray cut along 50mm line parallel to flange	<input type="checkbox"/>	<input type="checkbox"/>
10.	Cuts made at 130mm and 250mm at 90° and down to flange	<input type="checkbox"/>	<input type="checkbox"/>
11.	Used only the given length of tray	<input type="checkbox"/>	<input type="checkbox"/>
12.	Used wood blocks/other suitable tray protection	<input type="checkbox"/>	<input type="checkbox"/>
13.	Flange undamaged on completion	<input type="checkbox"/>	<input type="checkbox"/>
14.	Width accepts 100mm tray with maximum gap of 2mm	<input type="checkbox"/>	<input type="checkbox"/>
15.	Slots on tray ends intact, straight and square	<input type="checkbox"/>	<input type="checkbox"/>
16.	All pins and nuts tight, and nuts on outside of tray	<input type="checkbox"/>	<input type="checkbox"/>
17.	Cable bearing surface undamaged	<input type="checkbox"/>	<input type="checkbox"/>
18.	Double set correct hand (left/right as specified)	<input type="checkbox"/>	<input type="checkbox"/>
19.	Burrs, sharp edges and any vice marks removed	<input type="checkbox"/>	<input type="checkbox"/>
20.	Overall appearance to a commercially acceptable standard	<input type="checkbox"/>	<input type="checkbox"/>
21.	Work area conformed to requirements of HASAWA	<input type="checkbox"/>	<input type="checkbox"/>
22.	Correct safety procedures observed at all times	<input type="checkbox"/>	<input type="checkbox"/>
23.	Work area restored to a satisfactory condition on completion	<input type="checkbox"/>	<input type="checkbox"/>

Assessed by:

Start Date & Time: Finish Date & Time:

Target Time: 2.5 hours Time Taken: