



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1340(E)(A10)T

NATIONAL CERTIFICATE

PLATING AND STRUCTURAL STEEL DRAWING N2

(8090102)

10 April 2018 (X-Paper)
09:00–13:00

REQUIREMENTS: ONE sheet of A2 drawing paper

Calculators may be used.

This question paper consists of 5 pages and 3 diagrams sheets.

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
PLATING AND STRUCTURAL STEEL DRAWING N2
TIME: 4 HOURS
MARKS: 100

NOTE: If you answer more than **THREE** questions in **SECTION B**, only the **FIRST THREE** questions in **SECTION B** will be marked. All work you do not want to be marked must be clearly crossed out.

INSTRUCTIONS AND INFORMATION

1. Answer question one in **SECTION A** and any **THREE** of the four questions in **SECTION B**.
 2. Read **ALL** the questions carefully.
 3. Do **TWO** questions on the **FRONT** and **TWO** questions on the **REVERSE** side of the **DRAWING SHEET**.
 4. Number the answers according to the numbering system used in this question paper.
 5. **ALL** the construction lines **MUST** be shown.
 6. Add dimensions to the answers.
 7. Write neatly and legibly.
-

SECTION A**QUESTION 1**

FIGURE 1, DIAGRAM SHEET 1 (attached), shows the front view of a welded beam-to-beam connection. The two beams share a common centre line in the top view.

Draw in first-angle orthographic projection:

- | | | |
|-----|----------------------|-----|
| 1.1 | The given front view | (4) |
| 1.2 | The left view | (7) |
| 1.3 | The top view | (7) |

Mark allocation for drawing office practice for the above question is as follows:

- | | |
|---|-----|
| Print the Title 'BEAM –BEAM-CONNECTION' centrally beneath the two views and Scale . | (1) |
| Dimensions | (2) |
| Line work | (3) |
| Projection Symbol. | (1) |
| SCALE 1:5 | 25 |

TOTAL SECTION A: [25]

SECTION B

Answer any THREE of the four questions in this section.

QUESTION 2

FIGURE 2, DIAGRAM SHEET 1 (attached), shows two views of a connection between a right cone and a square pipe.

- | | | |
|-----|---|-----|
| 2.1 | Draw the two given views . | (2) |
| 2.2 | Determine the penetration line. | (6) |
| 2.3 | Develop the pattern of the right cone 'A'. | (6) |
| 2.3 | Develop the shape of the hole in the square pipe 'B'. | (6) |

Mark allocation for drawing office practice for the above question is as follows:

Dimensions	(2)
Line work	(3)
SCALE 1:2	[25]

QUESTION 3

FIGURE 3, DIAGRAM SHEET 2 (attached), shows the front view and the top view of a rectangular-to-round chute. .

- | | | |
|-----|---|------|
| 3.1 | Draw the two given views . | (3) |
| 3.2 | Develop the pattern of the plate for the chute. | (17) |

Mark allocation for drawing office practice for the above question is as follows:

Dimensions	(2)
Line work	(3)
SCALE 1:2	[25]

QUESTION 4

FIGURE 4, DIAGRAM SHEET 2 (attached), shows the front view and the top view of an oblique cylindrical hopper.

Draw the two views and develop the pattern for the hopper.

4.1 Draw the two given views . (2)

4.2 Develop the pattern for the hopper. (18)

Mark allocation for drawing office practice for the above question is as follows:

Dimensions (2)

Line work (3)

SCALE 1:1 [25]

QUESTION 5

FIGURE 5, DIAGRAM SHEET 3 (attached), shows a lobster back bend with a vertical inlet pipe.

5.1 Draw the given view . (4)

5.2 Determine the penetration line. (8)

5.3 Determine the pattern of the segment "S". (8)

Mark allocation for drawing office practice for the above question is as follows:

Dimensions (2)

Line work (3)

SCALE 1:1 [25]

TOTAL SECTION B: 75
GRAND TOTAL: 100

DIAGRAM SHEET 1

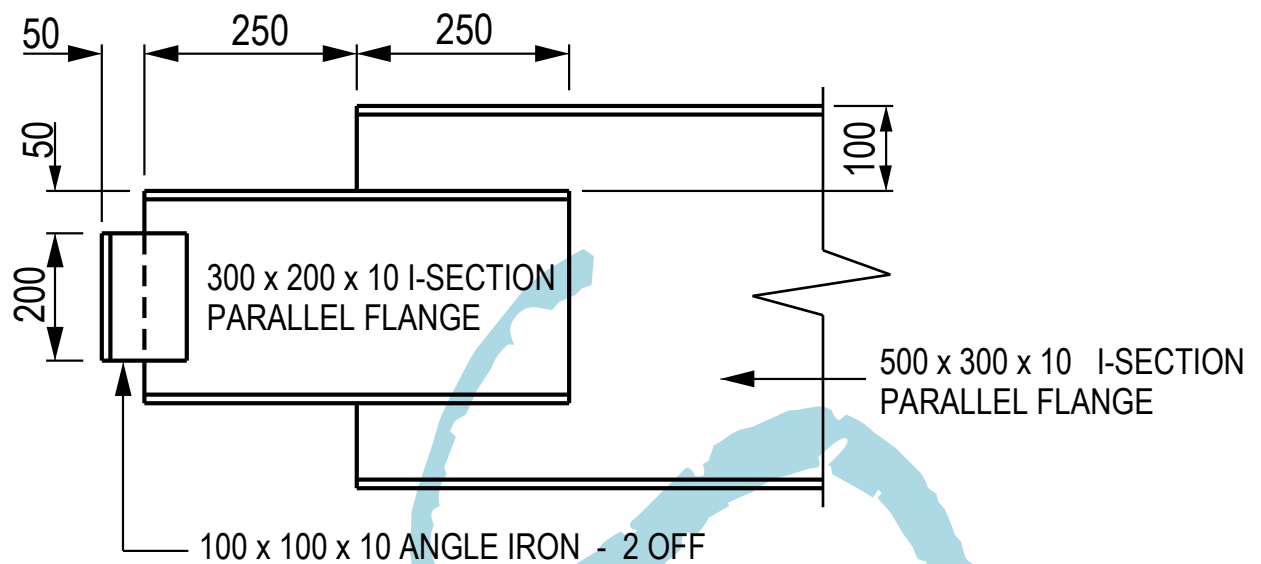


FIGURE 1

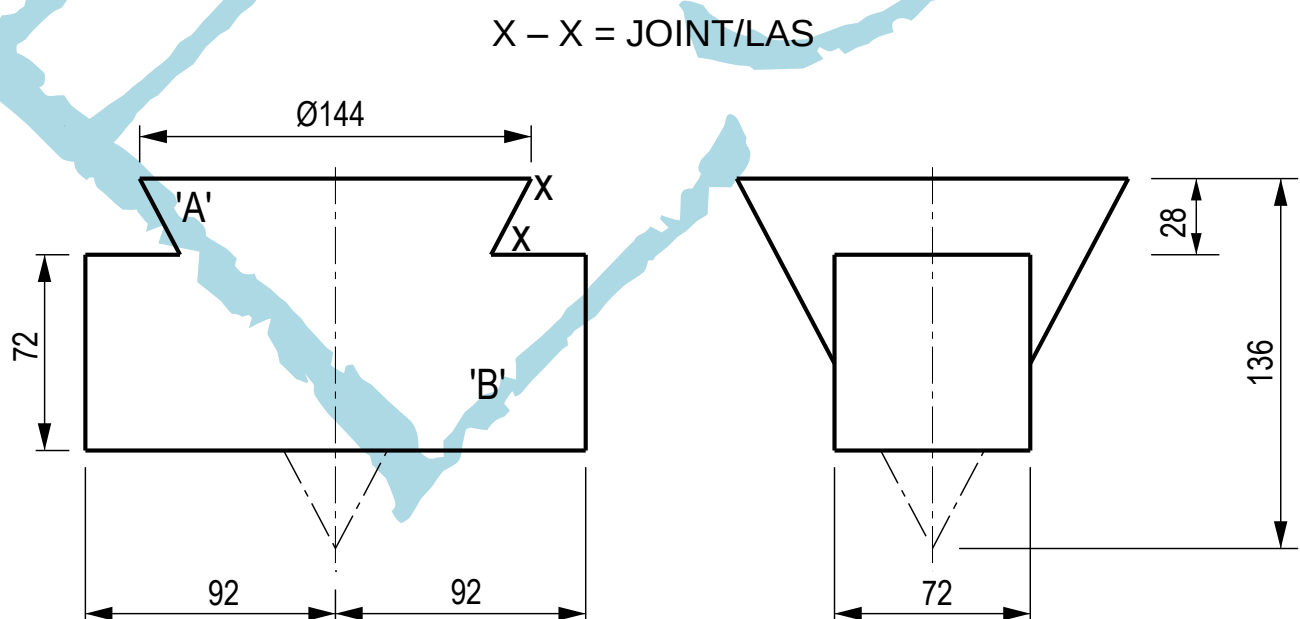


FIGURE 2

DIAGRAM SHEET 2

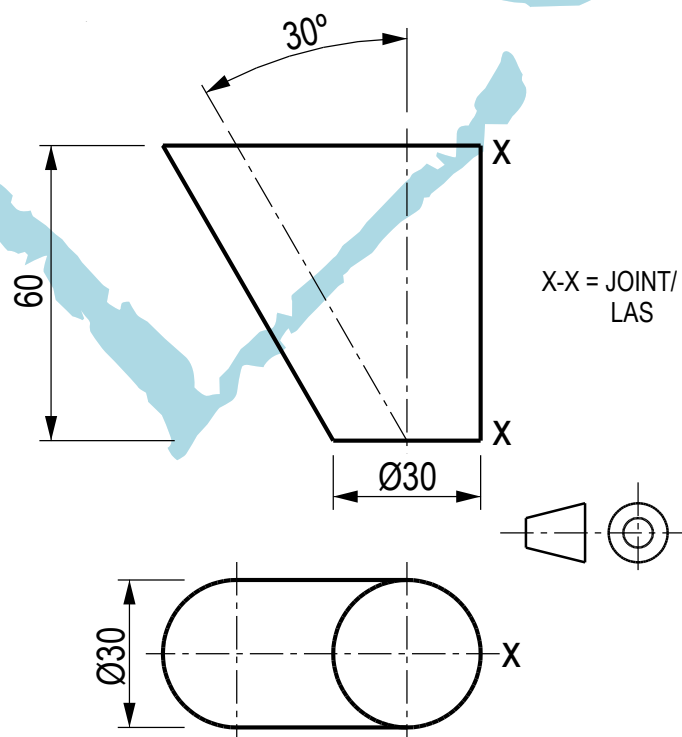
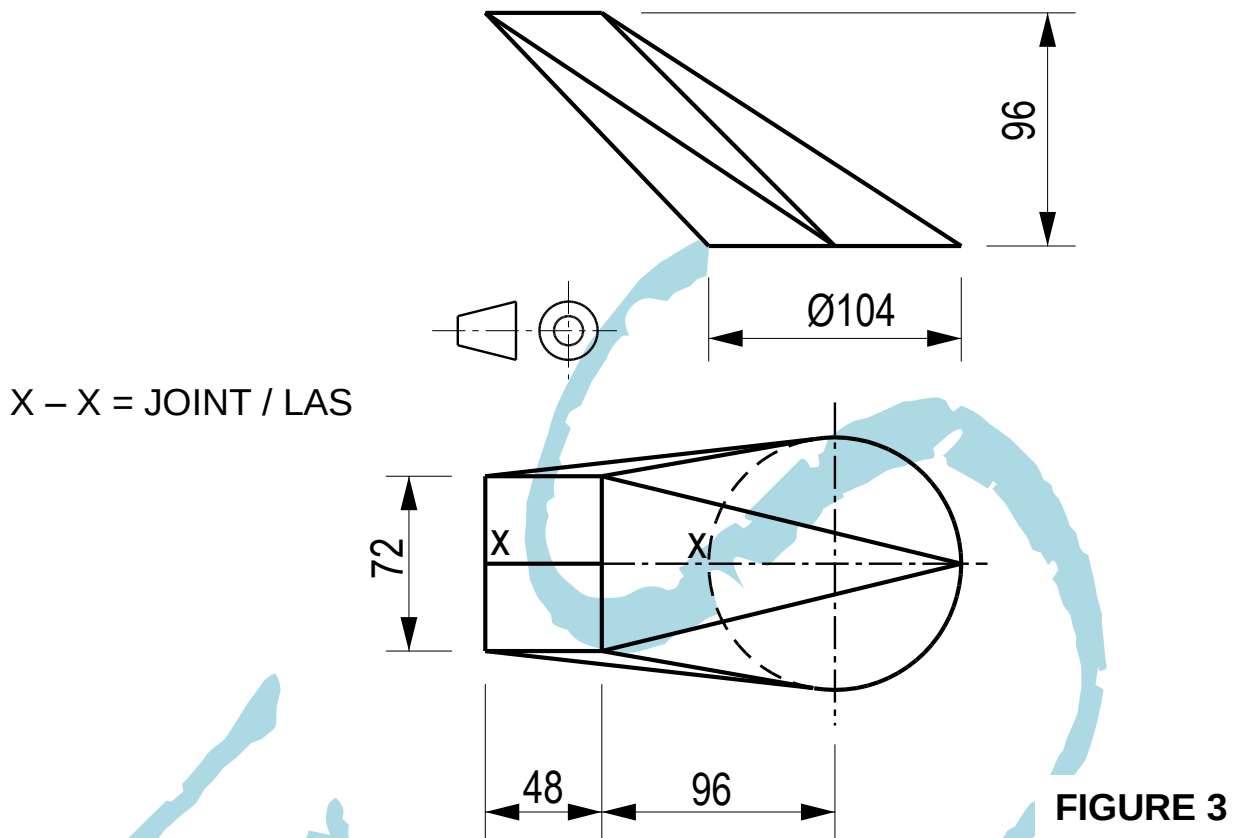


DIAGRAM SHEET 3

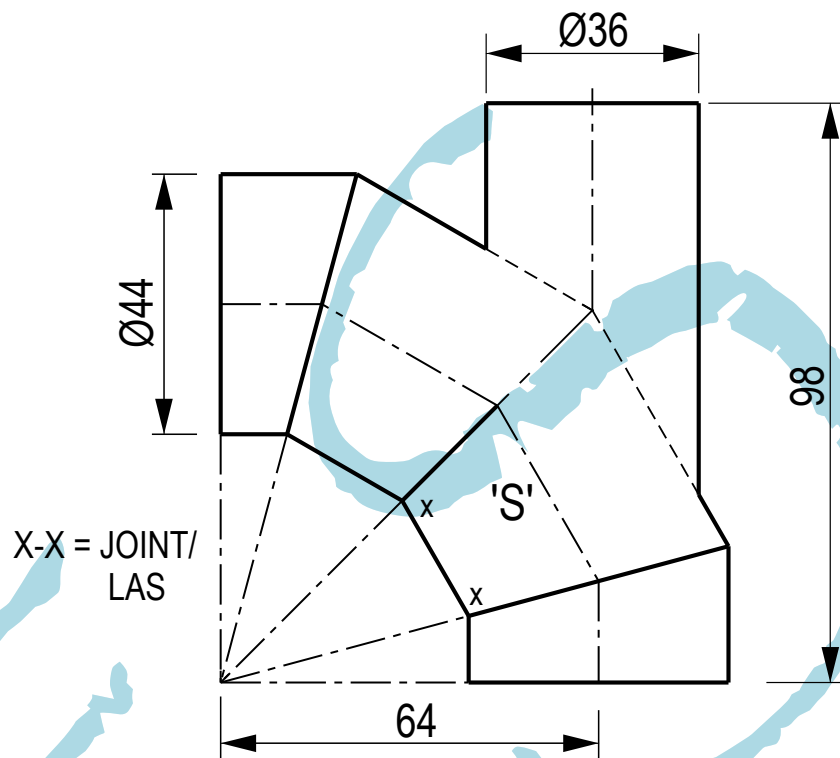


FIGURE 5