Arches
ARCHES

Setting up the centre (Formwork)

The following figures illustrate how to build an arch over an opening.

15.1 - Set up the arch support (centre) using a level. NOTE: The centre is set to the face of the wall by raising the line.

15.2 - Ensure that the top of the brick arch corresponds with the top of a brick course.

15.3 - Mark off the arch bricks positions by using a gauge rod to avoid unnecessary cutting of bricks.

15.4 - Build two courses on each side.

15.5 - Build up evenly on each side to prevent the arch centre from being pushed out of position.

15.6 - Check the face of the arch with a level or a straight edge.

15.7 - Insert the key brick which will complete the arch. NOTE: The key brick is the top most brick of an arch.
15.8 - Begin to build up the brickwork on either side of the arch. NOTE: The neat cutting in on the sides.

15.9 - The wooden support is removed and a portion of the uncompleted brickwork on the one side is shown.

15.10 - Semi-circle as used in a semi-circular arch

Illustrated above is an arch built with a one-brick-on-end-ring. Notice the wedge-shaped mortar joints.

To set out the Arch

a. Draw the span, assuming it to be 900mm.

b. Draw a perpendicular bisector.

c. Mark off rise 150mm.

d. Join (a) and (b) and bisect.

e. Where the bisector intersects the centre line, point (c) is the striking point of the required arch.

The setting out of a semi-circular arch is simple. Half the span is the rise.

Segmental arches

ROUGH segmental arches are built of standard bricks and the mortar between each brick is wedge-shaped. These arches are normally executed in stock bricks because the arch is used internally as a relieving arch. Before we can set out the arch we must know the rise. The rise to any segmental arch is normally one-sixth of the span.

15.12 - Geometrical setting out of a segmental arch
NOTES