

Metal lining of doors

The following should be considered when specifying the metal lining of doors. This could be on the outside of a fire door or on the inside of traditional folding window shutters.

Material

- sheet steel not less than 16 gauge (1.626mm).
- coach bolts.
- non-return screws (i.e. clutch head screws, ordinary screws with heads afterwards defaced or Philips screws with heads afterwards drilled out).
- door frames - angle-iron covers and rawlbolts.

Construction

- single lining: external

The sheet steel should be wrapped around the top, bottom and both edges of the door and secured to the stiles, rails and mountings with coach bolts at 150mm centres (nuts to the inside with the thread burred) and with non-return screws at 100mm centres round the top, bottom and both edges.
- single lining: internal

To cover the inside surface of the door but not the top, bottom or edges, secured to the stiles, rails and mountings with non-return screws at 100mm centres.
- double lining: external and internal

The sheet steel should be fitted as above and secured by coach bolts at 150mm centres passing through both external and internal sheets (nuts to the inside with threads burred).
- door frames

Fix the door frame to the brickwork with countersunk rawlbolts at 300mm centres. Cover the exterior of the door frame with angle-iron and secure with

non-return screws at 100mm centres.

Security notes

- at least three hinges must be fitted due to additional weight.
- hinges bolts should be used and are essential in all outward opening doors.
- two mortice deadlocks conforming to BS3621 specification should be fitted at approximately 1/3rd and 2/3rd levels.
- the angle-iron used for the door frame when fitted should provide a secure housing to accommodate the bolt from the mortice locks.
- any gap between the leaves of double doors should be protected by either a flat metal bar or T-bar suitably installed to overlap the leading edges of both leaves by a minimum of 50mm. This is essential practice to protect the doors and locks bolts from criminal attack.