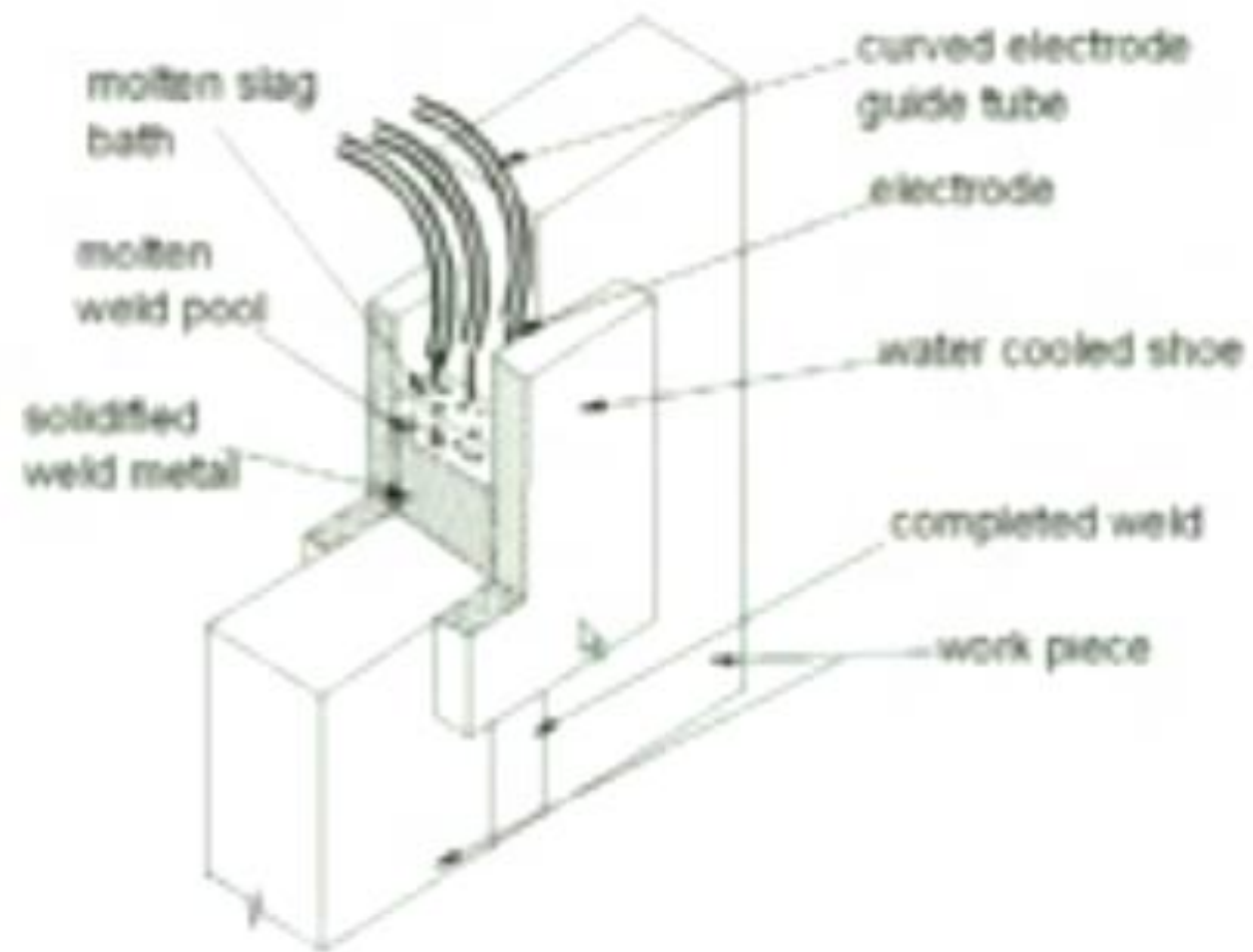


Electroslag Welding

- A welding process where fusion of base metal as well as filler metal is achieved from the heat generated by the electrical resistance of the molten slag.
- Weld pool is shielded by the molten slag, which moves along the joint as welding progresses.
- The process is initiated by an arc that heats up the granulated flux and forms the slag.

- The arc then gets extinguished and the molten slag provides the conducting path to the current.
- The slag remains in the molten state by the heat generated by its resistance
- The electrode remains dipped in the molten slag and gets melted and deposited as the welding progresses.



Features

- It is a vertical position welding process
- Once started, continues to completion.
- A single pass welding process irrespective of plate thickness.
- Very high deposition rates can be achieved with ESW
 - Very thick sections can be welded in a single pass.
- Because of even distribution of heat across the thickness,
 - No angular distortion of plates results.

- The molten slag bath over the weld pool acts both as the heat source as well as a shielding medium.
- A progressive solidification takes place from bottom upwards, and always there is a molten metal pool over the solidifying weld metal.
- Welds plates ranging in thickness from about 19 to 460 mm
- Two types of electroslag welding.
 - Non-consumable electrode guide cum contact tube
 - Consumable guide extending down to the molten slag.