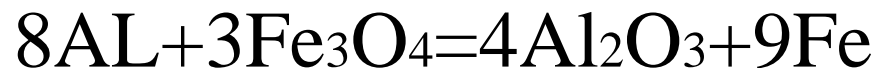


THERMIT WELDING

- ✓ Welding the parts by using liquid thermit steel around the portions to be welded is called thermit welding
- ✓ It is depending on the chemical reaction between iron oxide & aluminium. The reaction of thermit welding is



Thermit welding process is classified into two types

1. Pressure welding process
2. Non Pressure welding process

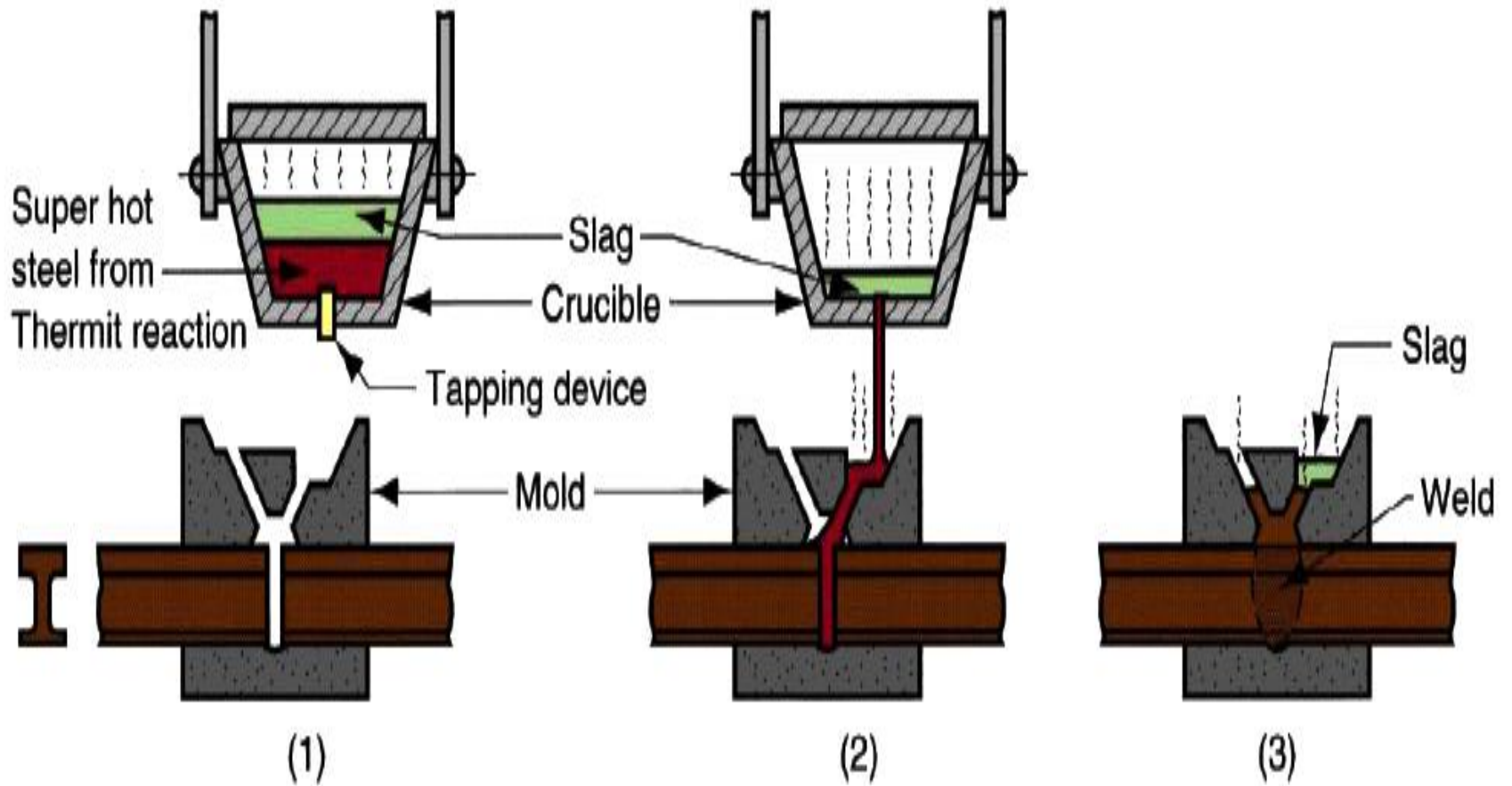
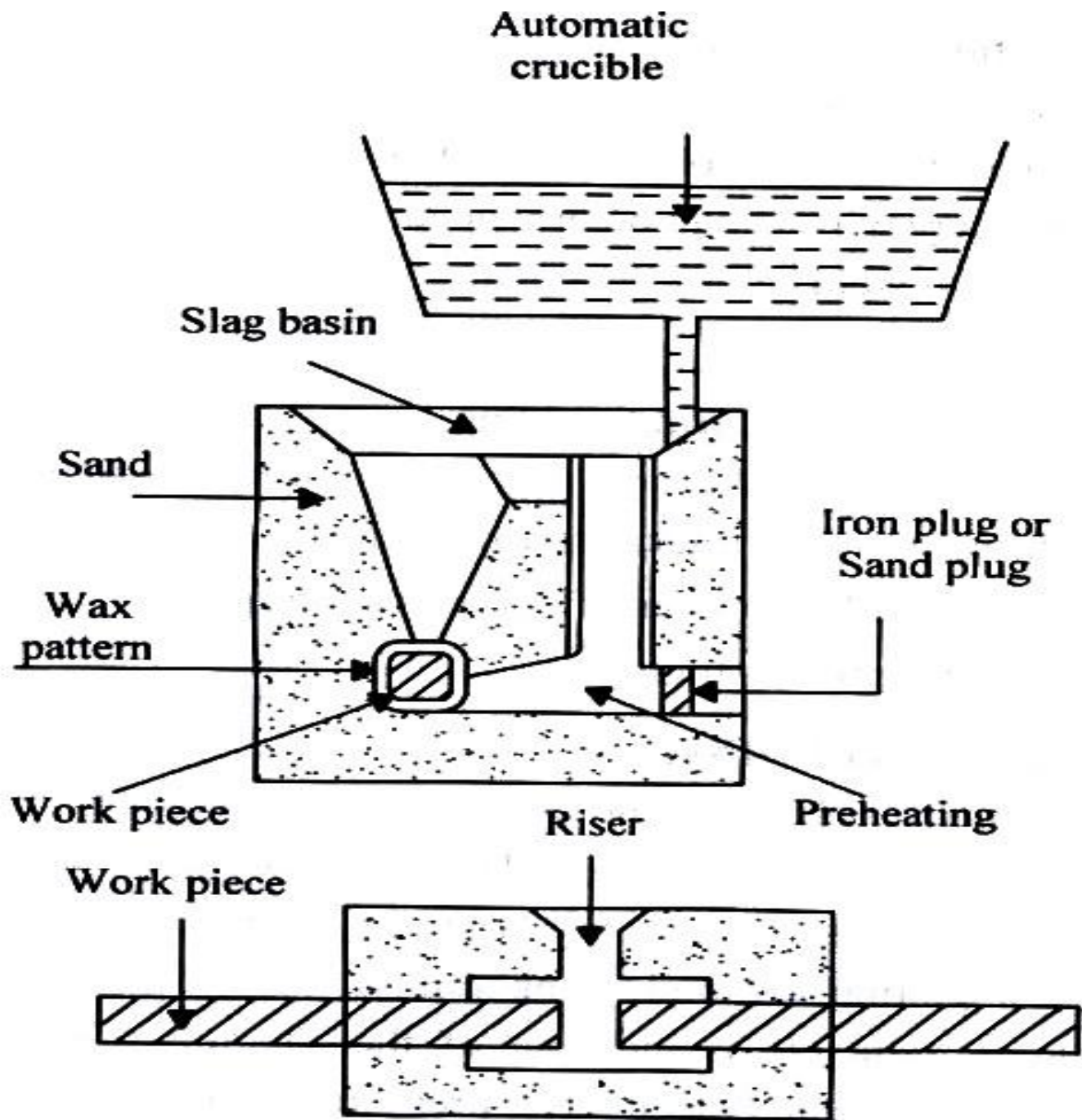


Fig: Thermit welding: (1) Thermit ignited; (2) crucible tapped, superheated metal flows into mold; (3) metal solidifies to produce weld joint.



PRESSURE WELDING PROCESS

- ✓ During the pressure welding process, the parts to be welded are butted & enclosed in a mould
- ✓ The mould can be easily removed after the welding of metals.
- ✓ The heated iron slag is poured to the mould and then the aluminium oxide is poured on the parts to be welded
- ✓ This will create the heating of parts & then the pressure is applied on the workpiece to joint

NON PRESSURE WELDING PROCESS

- ✓ The wax pattern is formed in and around the welding parts
- ✓ The sand is rammed around the wax pattern and mould is completed with gate, runner and riser around the joint area.
- ✓ Then the mould is heated and wax is melted, it will give a space between the joint
- ✓ The heated iron slag & aluminium are poured into the mould after solidification of liquid metal

Applications:

1. It is used in steel rolling mills
2. It is used to weld non ferrous metals
3. Pipes, Cables, Rails, Shafts are made in this process
4. Automobile parts are welded by this process