

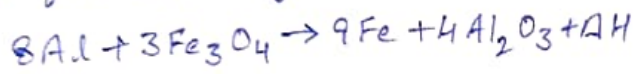
CHEMICAL REACTION WELDING

In thermo-chemical welding process, exothermic reactions takes place which produces the necessary heat for welding. Thermo-chemical welding is of following types.

- 1) Thermit Welding.
- 2) Atomic-hydrogen Welding.

THERMIT WELDING:

In this welding process, exothermic reaction takes place which produces the necessary heat for welding.



During this reaction, a very high temp. of the order of $2700^\circ C$ is developed. The reaction is non-explosive and requires 30 seconds to complete. Handling and storing of mixture is dangerous, since an initial temperature of $1100^\circ C$ is needed for ignition. The thermit mixture is kept dry, because if it becomes wet or damp it cannot be returned to original state.

Applications:

- For repairing fractured rails (railway tracks).
- Welding of broken frames of machines, fractured crankshaft, broken teeth of gears etc.

