Ans ⇒ Explosive welding is a Solid State welding process where Coalescence is produced by making one part Striked over another part at a very high but Subsonic velocity.

⇒ This can be done by the used of explosive usually ammonium Nitrate base

⇒ Explosive welding involves a High velocity oblique impact between a plate propelled by an explosive charge and a stationary plate when two plate are to be explosive welded.

Working principle ⇒

(1) The flyer plate is to be Joined with the parent plate.
(2) flyer plate should be an inclination from 1° to 10° Range.
(3) Thick plate is called as flyer plate
(4) at the point of impact, a high oxides and other films which are brought together and Stick fast.
(5) The velocity is in the Range of 150 to 500 m/s and pressure is in the

Range of 700 to 7000 N/m2.

Limitations ⇒ In industrial area the use of explosive will be Severely Restricted by the Noise and ground vibration caused by explosion.

(2) The Regulation Relating to the storage of explosive may well prove to be the main obstacle to the use of explosive welding

(3) metal thickness greater than 62 mm of each alloy cannot be Joined easily and require high explosive loads.

Applications ⇒

(1) This is used in welding, Joining and cladding of metals.

(2) A Number of dissimilar metals Combinations as aluminium to steel, Tungsten to steel and aluminium to stainless steel have been Joined Successfully with the Help of explosive welding.

(3) Pipes and tube upto 1.5m length have been clad with this process.

(4) Explosive cladding is used in die casting industry for nozzles, die cast biscuits

(5) Heat exchanger tube sheets and pressure vessels—