

in the screen printing technique, an excessively smooth surface results in poor adhesion of the fired thick film layers, whereas a very rough surface leads to poor reproducibility of film thickness.

(b) Printing Procedures :

The Fig. (3.1) shows schematically the screen printing process. This involves positioning the substrate on a carriage, which is then brought beneath the screen so that the substrate is in accurate registration with the pattern on the screen. The substrate, when in the printing position, is placed a short distance beneath the screen. The clearance between the screen and the substrate surface is termed the back away or snap-off distance. A small amount of the paste is dispensed onto the upper surface of the screen. A flexible wiper, called the squeegee, then moves across the screen surface, deflecting the screen vertically and bringing it into contact with the substrate and forcing the paste through open mesh areas. On removal of the squeegee, the screen regains its original position by its natural tension, leaving behind the printed paste pattern on the substrate. The substrate carriage is then removed from beneath the screen and the substrate replaced and the process continues.

The screen printer contains the following basic functional components;

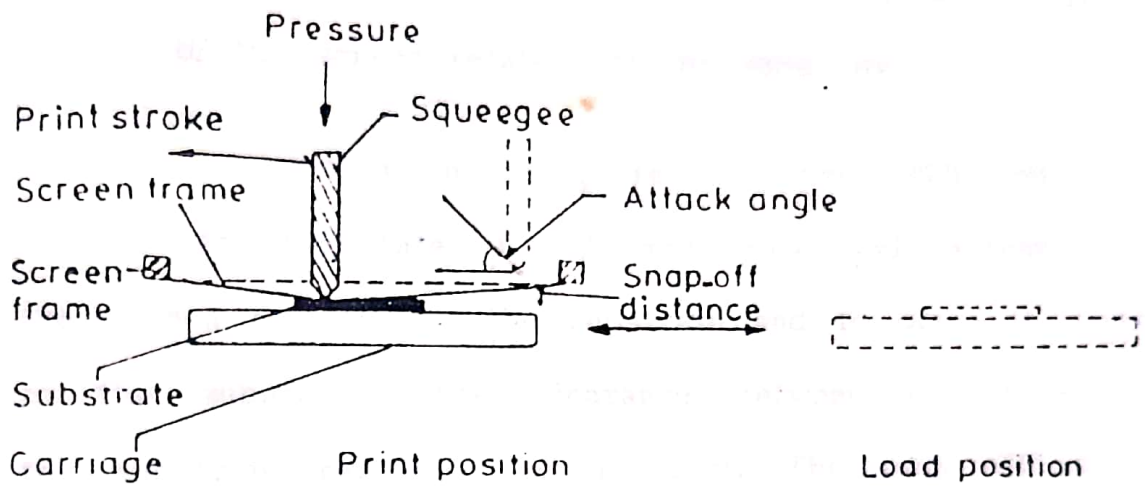


FIG.(3.1). Schematic representation of the screen printing process.