

PRINTING – PART XVI

REF: TT/ AUGUST 2021/ WK 4

b) Flat-Bed Printing Machine

Hand screen and automatic flat-bed screen printing both are available but an automatic Flat-bed Screen printing Machine is an improvement over the hand screen printing process. Higher production and exact registration of prints with different repeats can be achieved by automatic machine as compared to hand printing machine.



Fig 1.1 Flat-Bed Screen Printing Machine

Ref: technotexautomation.com

In this machine, printing paste prepared in tanks is poured onto the screen brought through flexible hoses. It is then distributed throughout the length of the screen. The squeeze is pressed onto the screen.

During printing, the fabric is brought on to the printing table through a feeding arrangement and gummed to the conveyer belt on the table. The conveyer brings the fabric periodically under the screens and stops while the screens are lowered on the required parts of the fabric by a special mechanism. The squeeze makes one or more strokes over the screen after which the screens are lifted again. The conveyer returns to its original position where it is washed and dried and a new fabric is gummed on it. After printing, the fabric is dried by passing through a hot-air chamber.

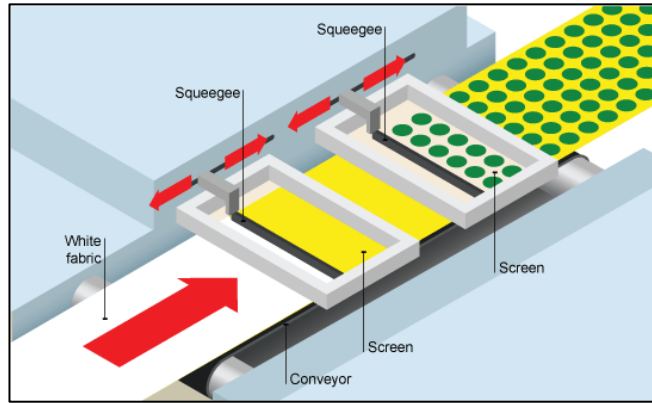


Fig 1.2 Principle of a Flat-Bed Screen Printing Machine

Ref: create.piktochart.com

Main parts of a Flat-Bed Printing Machine are -

- **Feeding Device** - Feeding device consists of guider and tension roller to maintain the consistent fabric flow in the printing machine.
- **Gumming Device** - This device consists of two rubber coated roller. One roller is immersed in the gumming tank. This applies gum to another roller attached to the blanket.
- **Printing Table or Flat-Bed system** - The Flat-bed machine is placed on heavy duty cast iron structure to ensure vibration free cloth feeding.
- **Squeeze System** - Many factors such as composition, size, angle, pressure, and speed of the squeeze determine the quality of the impression made by it. Apart from traditional rubber squeeze, other squeeze blades are also developed for better performance.
- **Blanket washing unit** – The unit consists of two brush rollers driven by electric motor and specially designed squeeze.
- **Dryer** - The high capacity float dryer with suitable jets, radiators, fan assembly and insulating panel gives fast and even drying for all types of print. The dryer capacity can be increased by adding extra dryer modules.

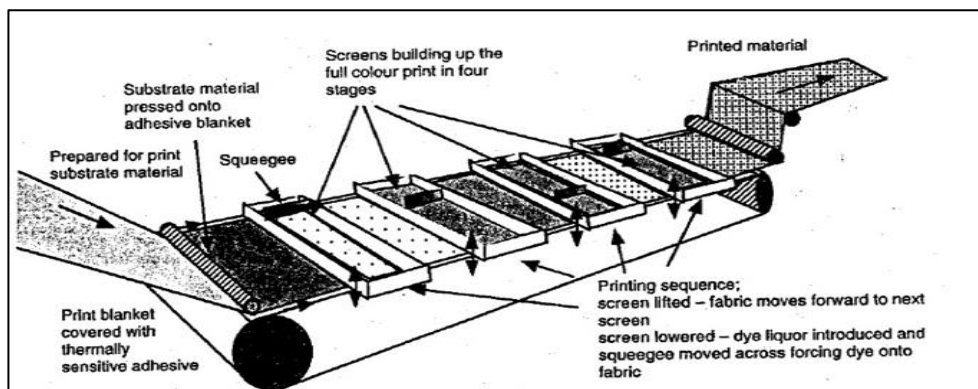


Fig 1.3 Working of Flat-bed Printing Machine

Ref: textilechemroseblogspot.com



References:

1. <https://apparelresources.com/>
2. <https://textilehelp.org/>
3. <https://www.textiletoday.com.bd/>
4. <https://textilechemrose.blogspot.com/>
5. <https://www.newclothmarketonline.com/>

.....To be continued.....

UNSCRAMBLE THE JUMBLE WORDS
ATSEPER
RIGIOLAN
LANKETB
RABVIONIT

Last week`s Answers: 1) CLEANING 2) AGAINST 3) EXPOSURE 4) SCREEN

Wishing you a great week ahead!

Technical Tuesdays is a knowledge sharing initiative by Resil Chemicals Private Limited
arc@resil.com | www.resil.com