

**1. What is inking system roller setting?**

Setting the correct pressure between the inking rollers in order to supply required amount of ink during printing.

**2. What are the dimensions of film strips used for roller setting?**

12"x2" and 12"x 1"

**3. How the sandwich is prepared?**

By placing one 12"x1" film strip between 12"x2" film strips.

**4. By which method the forme roller to plate cylinder pressure being set?**

Ink strip method.

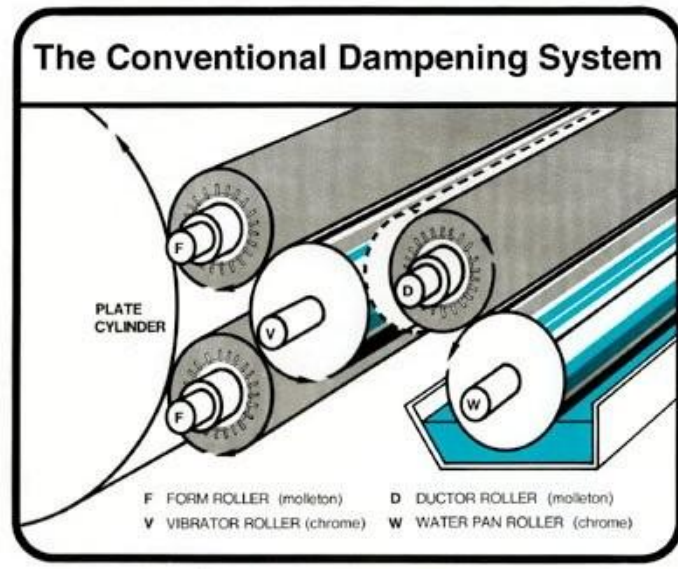
**5. Which film strip in the sandwich is pulled for setting the rollers?**

The centre 12"x1" film strips in the sandwich placed at the three ends is pulled.

**Ex no:6 PREPARING OF FOUNTAIN SOLUTION AND DAMPENING SYSTEM**

**Aim:**

To learn about the fountain solution ingredients and to mix with water to make it as dampening solution for offset printing.



**Fountain Solution:**

This solution composed of a lot of ingredients. The fountain solution is mixed with water in offset printing to

1. Apply even dampening solution over the plate.
2. To give wettability.
3. Avoid surface tension.

The fountain solution is prepared by mixing the following ingredients.

**(i) Acid or Base:**

The Acid or Base present in the Fountain solution is used to maintain the pH value while the dampening solution is mixed during printing

**(ii) Gum:**

The gum Arabic solution is used in the fountain solution to desensitize the non-image of the plate.

**(iii) Corrosion inhibitors:**

These are present in the fountain solution to avoid the reaction of ingredients over the plate to form corrosion.

**(iv) Buffer:**

Magnesium Nitrate is used as the buffer in the fountain solution which neutralizes the acidity or alkalinity of the solution.

**(v) Wetting Agent:**

ISO Propyl alcohol is used as the wetting agent. It reduces the surface tension of water in the dampening solution.

**(vi) Drying Stimulator:**

During the contact of ink and water over the plate surface the drying capability of the ink becomes low. Hence the drying stimulator helps to speed up the drying of ink.

**(vii) Fungicide:**

This is used to avoid the formation of fungus while using the dampening solution in the duct.

**(viii) Anti foaming Agent:**

This is added in the fountain solution to avoid the formation of foams (bubbles) in the dampening solution, when the dampening solution is used in the fountain duct.

**(ix) Alcohol:**

ISO Propyl Alcohol is used in the fountain solution. This is used to increase the contact angle and reduce the surface tension of water during the use of dampening solution.

**Preparing the Dampening:**

Dampening system is used to supply the required amount of dampening solution of the plate surface. In our machine five rollers are present in the dampening solution the rollers should store an amount of dampening solution on its surface. For the reason three or five roller surfaces are covered with an absorbent cloth called molten cloth.

For preparing the dampening system, check the body surface of the dampening roller and their covers. The dampening roller and their covers are dampened before the rollers are fixed in the dampening units because some more time is required for even absorbency of water supply on their surface.

After wetting the surface of the roller covers, the dampening rollers are fixed in the required area fountain solution and water mixture is used as the dampening solution.

**Conclusion:**

Thus we have prepared the fountain solution and the dampening system for printing.