Lecture-9

Contents

- Process of Dyeing with Reactive Dye
- After Treatment of Dyeing
- Functions of Chemicals

Dyeing Process of Cold/Medium Brand Reactive Dye:

Procedure:

At first auxiliaries and water are added in the dye bath. And it is kept for 5 minute.

Then material, dye is added respectively.

After 10 minutes salt is added. After adding salt dye bath is heated to 40^0-50^0C kept for 20-30 minutes. This is the exhaustion period of dyeing.

Then alkali is added in the dye bath. After adding alkali the dye bath is heated for 40-60 minute at 50-60^0C. This is the fixation period.

Dyeing Process of Cold/Medium Brand Reactive Dye (Continued)

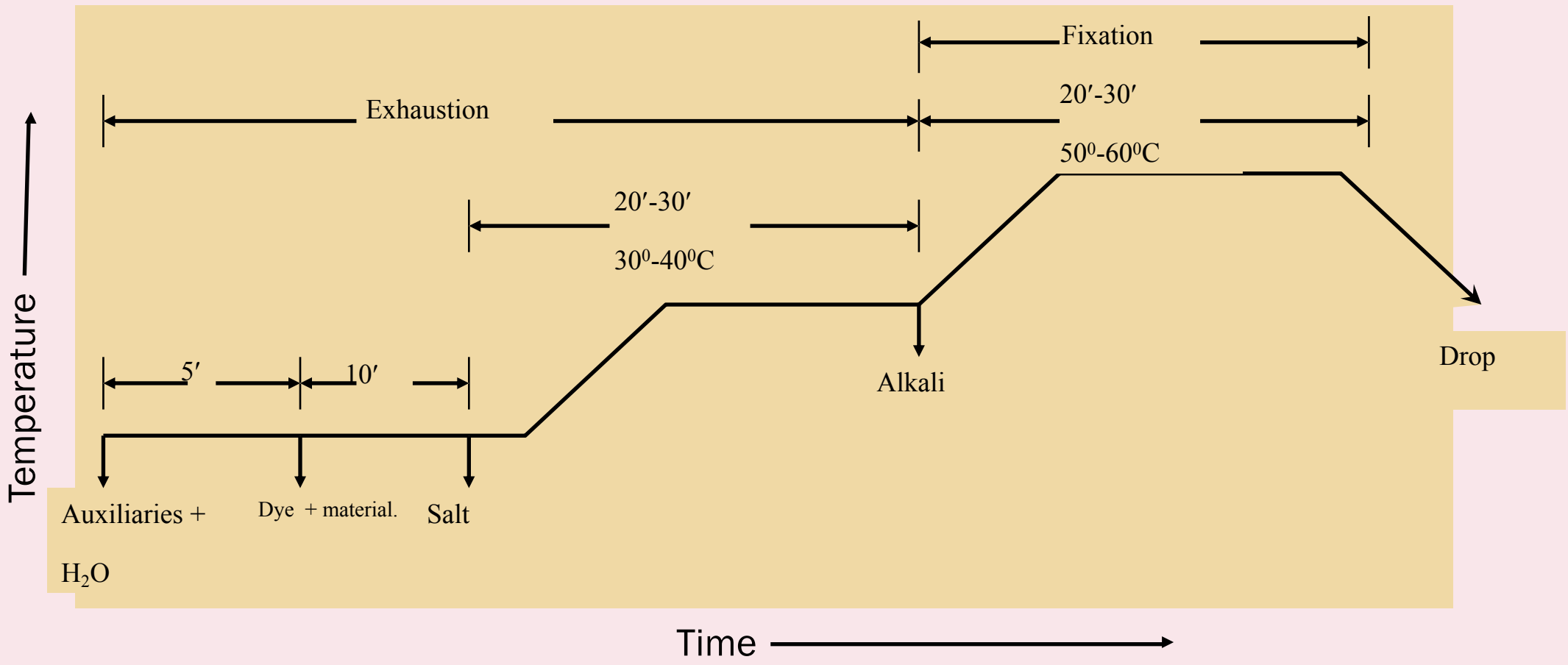

Fig: Dyeing Curve

Dyeing Process of Cold/Medium Brand Reactive Dye (Continued)

After Treatment:

1) After dyeing operation is completed the dye material is put into a bath containing 1% stock solution of acetic acid. This operation is done for neutralizing the fabric. This operation is performed at 60^0C for 10 minutes.
2) Secondly the material is treated with a 1g/L soap solution, which removes the unfixed dye from fabric surface, and makes the surface clean.
3) Thirdly material is treated with a hot water bath.
4) Fourthly material is treated with a cold-water bath.
5) Finally the material is dried in a drier.

Dyeing Process of Cold/Medium Brand Reactive Dye (Continued)

Function of chemicals used for dyeing with reactive dye

1) Salt:

- Salt are used to increase affinity of the dye to fibre .
- To decrease the hydrolyzed of the dye.
- To add extra energy to push the dye in the fibre that increase the absorption
- To neutralize the electro negativity of fibre.

2) Alkali:

- Alkali is used to create optimum pH in the dye bath
- It is used as a fixing agent.
- Without it no dyeing will take place.
- The strength of alkali used depends on the reactivity of the dye.
    - Strong alkali (pH 12-12.5) for lower reactive dye.
    - Medium alkali (pH 11-12) for medium reactivity.
    - Weak alkali (pH 9-11) for strong reactivity.


Thank
You!