



LUBRICANTS OR ANTI - CREASING AGENT –PART I

REF: TT/ MAY 2020 / WK 2

Introduction

Lubricants or anti-creasing agents are essentially used in any machinery where fabrics are dyed in rope form. However, these chemical auxiliaries have gained more importance with the introduction of high turbulence machines and evolution of processing methods. In low liquor ratios and high temperature, when fabric is processed in dyeing machines in rope forms fabrics are folded and tends to crease. These lubricating agents are must.

Inside the jet nozzle the surface of the fabric are subjected to abrasion and friction between fabric and fabric or between fabric and machine parts, resulting into a fibrillated surface or abrasion/chafe marks. In high temperature, if crease or chafe mark is formed, these are permanently seen on the fabric surface and cannot be removed easily. As in jet/overflow machines the fabric is carried in rope form, creases are inevitable, Therefore, lubricants are used to avoid the occurrence of rope marks, creases and abrasion on textiles. .

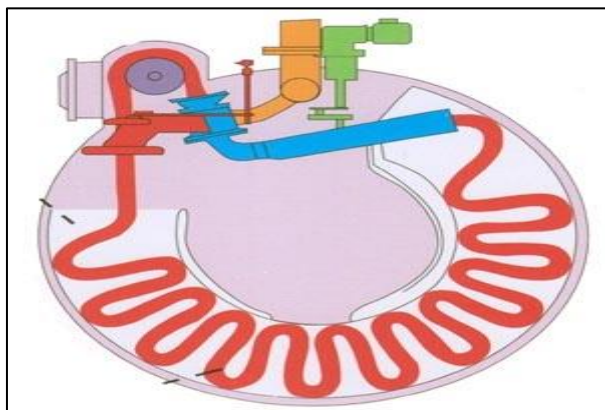


Fig 1.1 Fabric passing through jet nozzle



How lubricants work?

A lubricant forms a thin uniform protective coating around the fiber to lower the surface friction, thus minimizing the formation of durable creases during high temperature processing. The reduction in fabric to fabric friction results into opening of ropes and avoids the formation of permanent creases. Lubricants also increase viscosity of liquid making the water thick that too avoids the formation of crease marks and improves running properties of ropes.

Reduce fabric to metal friction-Fabrics run better and no chafe or crush marks are formed

The lubricant should have the properties so that it helps to emulsify, it does not undergo phase separation with extreme changes in pH and temperature. The lubricant should be stable in high temperature and over a wide range of pH. Suitable lubricating agents are hydrophobic surfactants, which also contains a proportion of emulsified oil or wax.

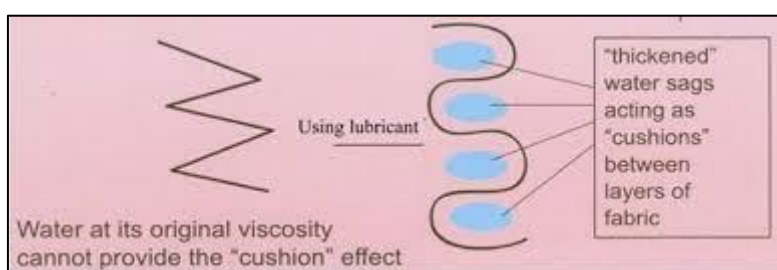


Fig 1.2 Fabric and lubricants

To be continued....

Wishing you a great week ahead!

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