

TEXTILE INDUSTRY

Like many other industries textiles processes can also obtain significant benefits from the environmental control system with a TecnoCooling humidification system.

The yarns, until the transformation in tissue, must balance their own moisture and that contained in the surrounding air. A lack of moisture in the air is unpleasantly noticeable. Non air-conditioned factories or with a different humidification system frequently encounter production difficulties during embroidery, weaving and spinning yarns due to breakage and high static electricity levels.

The American Institute of Textile Technology found that wool, by increasing relative humidity from 60 to 70% during storage and processing, shows a 15% increase of its elasticity, which drastically reduces breakage during processing. Adjusting humidity levels with a TecnoCooling misting system increases the tensile strength of all natural fibers, removes static electricity improving the workability of the yarns and fibers, controls the suspended residual and improves comfort of work areas.

STATIC ELECTRICITY

It is well known in the textile industry that the relative humidity, and hence the moisture regain (content) of textile fiber plays a very important role into the reduction of static electricity.

Virtually all textile fibers, when completely dry, have very high electrical resistances. However, as the relative humidity increases, the fibers absorb moisture and their electrical resistance decreases with a consequent reduction electrostatic charges generation.



ADIABATIC COOLING

Textile industry can also benefit from the cooling effect provided by our high-pressure humidification system. The mist water droplets are quickly absorbed by the air, evaporation lowers summer temperatures and the result is a natural cooling system.

WORK ENVIRONMENT

The problem of dry air is found especially during winter months when heating systems are used in working areas. The environment also affects our well-being and a work environment with dry air can cause several problems:

- Dry nose and eyes, burning irritation, pain
- Danger of infection, dry nostrils are very sensitive
- Creates headache after light dehydration
- Enhances evaporation and suspension of solvents, paints and glues
- High concentration of airborne dust
- Static Electricity
- Affects processing, without noticing it, because of frequent stoppages for repeated failure or manufacturing problems, work stress is increased

The right humidity level, usually between 55% and 70% RH offers as a result a better product quality with minimum downtime and production waste, increasing profits.



HUMIDITY AND YARN PROPERTIES

Water is an important part of yarns weight. About 7% of dry cotton weight is made by water, in a dry synthetic yarn such as Nylon it is 2-3%. The specific weight of wool is made by water up to 18%.

DUST CONTROL

With our humidification systems it is possible to reduce the problem of suspended particulate. When the air is humidified, the yarn and so the dust absorb much moisture, this means increasing the weight of the dust particles, preventing them from spreading easily.

