Sustainability in commercial laundering processes

Module 1
Usage of water

Chapter 1

Meaning of sustainability

Content

Education and Culture

Leonardo da Vinci

- Sustainability
  - Definition
  - Background
  - Impact for laundries
  - Measures for sustainable processes in laundries
  - Active and passive environmental protection

Learning targets

Education and Culture
Leonardo da Vinci

After finishing this chapter, you will

- Know the common accepted definition of Sustainability
- Know the political evolution process regarding the definition of sustainability
- Know about the impact for laundries
- Know measures to implement a sustainable process in practice
- Be able to distinguish between active and passive measures for environmental protection

Sustainability means

- to meet the needs of the present without the risk that future generations are not able to meet their own needs

- i.e. the today's generation is required to use resources in a way that future generations still can live in a "worth living" environment

Background sustainability

- in 1992 the UN Conference on Environment and Development (UNCED) took place in Rio de Janeiro
- according to this conference framework directives of the European Commission define certain environmental targets which have to be carried out by all EU members
- one of the directives is the water framework directive 2000/60/EC
- 2000/60/EC requests the creation of incentives for efficient use of water resources till 2010 by water fee politics
  - improvements of sustainability of production processes should be reached till 2015
  - i.e. in all member countries the inshore waters should be in a “good status”

Consequences of 2000/60/EC for laundries

Education and Culture
Leonardo da Vinci

- water framework directive 2000/60/EC has to be transposed into national regulations and
- impacts all water using enterprises, this means
  - for laundries as well
- in consequence fees for fresh and waste water will increase in a way that laundries are forced to save water
- in addition, during introduction of water saving measures it has to be taken into account that there are
  - no negative effects on wash performance and
  - no increasing costs for laundering

Sustainability measures in laundries

Education and Culture
Leonardo da Vinci

Realisation of "good waste water quality" by

- reduction of fresh and waste water consumption
- removal of harmful components in waste water by means of treatment
- reduction of waste water temperature
- reduction of chemistry and use of environmental harmless detergents and washing aids

Other measures for improvement of sustainability, e.g.

- reduction of energy consumption by lower water consumption and low temperature washing processes
- use of gentle wash processes with consequence of increased textile life time

⇨ active and passive measures for sustainability

Active and passive environmental protection

Education and Culture
Leonardo da Vinci

active measures

Improve washing process by

- ⇨ optimized washing process, e.g. reduction of water consumption
- ⇨ suitable use of detergents
- ⇨ reduced washing temperatures
- ⇨ optimized machine technology
- ⇨ without negative effects on wash performance as well as on functionality and life time of textiles

passive measures

Improve washing process by

- ⇨ waste water treatment for waste water load
- ⇨ usage of heat exchanger technology for reduction of waste water temperature