

ABSTRACT

The objective of this study is to trace techniques appropriate for the minimisation of environmental pollution in the wet processes of the textile processing industry. On the basis of the techniques selected as Best Available Techniques (BAT) appropriate for this industry, recommendations for the Flemish Government are put forward. These concern the environmental permit legislation, as well as the promotion of BAT by investment support.

As the study shows, the wet processes in the textile industry can be described as a wide range of activities, including pretreatment of textile materials, bleaching, dyeing, printing, mothproofing, coating, etc. The study also covers the production of carpets and the backing process. The most important environmental effect of these processes is the discharge to water. Emissions to air are predominantly caused by the use of solvents in the printing processes and in the backing of carpets. The production of waste is mostly associated with spinning and weaving processes, but can also occur when carpets and fabrics are finished.

The “PARCOM Recommendation 94/5 Concerning Best Available Techniques and Best Environmental Practice for Wet Processes in Textile Processing Industry” was used as a basis for the selection of BAT for the Flemish industry. The 125 PARCOM recommendations (referred to as P-numbers) are supplemented and put more concrete by additional recommendations (referred to as B-numbers).

This study describes the BAT that can be used to minimise the environmental effects of the textile industry by means of prevention (e.g. minimal application techniques), process integrated measures (e.g. maximal exhaust of the dye bath by pH-control), measures for reuse of waste streams (e.g. selection of sizing agents) and end-of-pipe techniques (e.g. self neutralisation). The BAT selected are translated to recommendations towards environmental permit conditions and investment support. Furthermore, the BAT can be used as a technical basis for the Flemish emission limit values as present in the Vlarem II regulation.