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VECOM READY FOR STRICTER ENVIRONMENTAL REQUIREMENTS

The agents that are commonly employed for the cleaning and surface treatment of metals are generally not really environmentally friendly. This is because stronger, more aggressive agents are often necessary and/or less expensive and, more importantly, remove rust and other contaminants more rapidly and effectively than the more environmentally friendly agents. The only restriction on their application is the environmental legislation designed to protect both the users and the environment.

The general trend is towards increasingly strict environmental requirements. This applies for example to admissible emissions during their application and for admissible concentrations of pollutants in waste streams specified by pollutant. Permits are required for the application, processing and removal of various environmental pollutants.

The environmental requirements can however only be tightened when there are more environmentally friendly alternatives. Product development within the Vecom group is consciously focused on the development of environmentally friendly agents. Market developments in this area are moreover monitored closely. It is often the case that the environmental requirements are altered in favour of cheaper and equally effective alternatives as soon as these appear on the market. Conversely a number of alternatives that have been developed will then be less attractive when they are not yet able to compete. It is for this reason that Vecom already has a number of developments to environmentally friendly alternatives in reserve. These enable Vecom to be ready for stricter environmental requirements.



The R&D team of Vecom

Some examples of environmentally friendly alternatives developed by and available to Vecom:

- Austenitic types of stainless steel such as type 304 and type 316 are generally pickled in a mixture of nitric acid (HNO_3) and hydrofluoric acid (HF). The application of the very toxic HF is restricted to a minimum. During the application of nitric acid nitrogen oxides are released, which are extremely toxic. Vecom has developed a number of alternatives that hold the nitrogen oxides far under the MAC value. An NO_x -lean pickling spray has been developed, pickling accelerators have been developed and it is even possible to pickle NO_x -free in a bath. Alternatively there is the Regenabath project in which, in collaboration with other parties, a successful method has been developed for the total regeneration of pickling baths for stainless steel.
- Carbon steel is generally pickled in a bath of inhibited hydrochloric acid (HCl). Vecom has developed a pickling agent that is free of hydrochloric acid. This product, VPX One Step[®], makes it possible to pickle and phosphate in one step without using acids. It causes no emission problems, is pH neutral and hence friendlier towards humans and the environment, can be applied at lower temperatures (less energy) and also produces less waste.
- Vecom also has a broad range of agents in its product package for cleaning and surface treatment that are biologically degradable and result moreover in a lower value of the Chemical Oxygen Consumption in the waste water.