Sector of Graphic Arts

Rules and regulations in act do not allow the water from the graphic arts industry to be discharged into the environment. This is an important problem for these companies which are obliged to send the effluent away using specialised companies, with a high disposal cost.

C&G has been highly specialised in this field since 2004, and today the customer is advised to use a system of **decantation . agitation – evaporation – oxidation** when treating such water.

The process includes a first stage of decantation which separates the larger particles through gravimetric force. The water is then sent to a section for agitation using an injection of air to oxidize and /or strip any eventual presence of volatile composites such as solvents and/or ammonia. The pre-treated solution is then sucked in by effect of depression to our evaporation system, which effects the recovery of the distillate and the consequent concentration of the effluent. The distillate can be reintroduced into the productive cycle without undergoing any other treatment, and is used in particular for clearing purposes of the machinery used. Otherwise it can be discharged to the drains after an oxidation treatment to reduce any remaining COD.

Liquids which are treated using this process system include all the effluents that contain water based inks, developing liquids, detector liquids, and traces of solvents.

Such an effluent is made up of a turbid, coloured water loaded with non aggressive organic substances. The distillate obtained is limpid and colourless, although in some cases the presence of organic substances might make it unsuitable for direct discharge into the sewers.

The low quantity of daily effluent present in a typical industry of graphic arts allows the use of vacuum evaporators with a “dry” technology, which gives a mud/powder as the final refuse to dispose of. This is an advantage as in many countries the disposal of a mud is more economically convenient than the disposal of a liquid..

A client in Spain was awarded an environmental prize for the application of C&G machinery and technology in this field. He covered the purchase costs of the machine in under two years, and uses the distillate for sanitary purposes in his graphic arts company.