Abstract

Plant and Process for Cleaning

A tank cleaning plant, suitable for cleaning road tankers prior to reuse, includes spinners (24) to subject the tank to jets of hot or cold water at a pressure above 5 atm. The water jets may include additives such as detergents or acids. All the resulting effluents are collected in a common sump (30) from which any surface layer of organic material may be skimmed off. The collected effluent is subjected to an initial separation process for gross contaminants, for example with a filter (32) or an interceptor. The effluent is then dosed to enhance flocculation before being treated by a cross-flow ultrafiltration plant (38). The resulting permeate may be mixed with absorber material and passed through a second ultrafiltration plant (40) or it may be subjected to nanofiltration. The resulting water is consistently clear and may be reused for tank cleaning, or discharged without hazard to the environment. (Figure 2)