

Paper ID: A371

### Portable Industrial Waste Water Treatment System

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#### EXTENDED ABSTRACT

In the present work, a portable water treatment unit is designed and experimentally validated. The unit consist of three interactive sections namely, aeration-oxidation section, agglomeration section and adsorption section. Waste water collect from gebeng industrial area was the treatment target of the present work. The flow in the water treatment system was driven by one pulsation pump and solenoid valve to insure continues flow through all the stages and with minimum energy consumption. The target of the present work is to treat metyl tert-butyl ether (MTBE) waste and to optimize the controlling factors like the pulsation time and air trapping time of the unit efficiency. The experimental results showed clearly that the MTBE removal efficiency is highly controlled by the cycle pulsation time where the maximum MTBE removal efficiency of almost 96% was achieved with 6 L/min air flow and 3 minutes open valve and 3 second water column release time.

Keywords: Adsorption, Pulsation Clarification, Stripping, MTBE.