

Staff No. : 5647
Salutation : PROFESOR TS. DR.
Project Leader Name : AZMI BIN ARIS
Research Alliance : RESOURCE SUSTAINABILITY
Faculty / PTJ : JABATAN TIMBALAN NAIB CANSELOR (PENYELIDIKAN DAN INOVASI)
School : SEKOLAH KEJURUTERAAN AWAM
Research Classification (IPASA) - RC - RESEARCH INSTITUTE FOR SUSTAINABLE ENVIRONMENT
Category : Science Technology (ST)
Staff Classification : Major Research
Email : azmi.aris@utm.my
Gender : MALE

Programme Leader :

AZMI BIN ARIS

Programme Name :

CRG 14 - WATER RECLAMATION FROM SEWAGE FOR INDUSTRIAL APPLICATION IN PASIR GUDANG AREA

Title :

CRG 14.1 DEVELOPMENT OF LOW-COST FILTRATION SYSTEM FOR WASTEWATER REUSE

Start Date :

01/11/2019

End Date :

31/10/2022

Duration :

3 years 0 months 0 days

Type of Grant :

Collaborative Research Grant

RMK :

11

EXECUTIVE SUMMARY

Recovery and reuse of sewage or domestic wastewater (*sometimes referred to as municipal wastewater*) has been widely practised. At present, recovery and reuse of wastewater (from sewage) with different purposes have been applied in more than 60 countries worldwide. Majority of the reclaimed water are used for irrigation. Other uses include industrial applications, non-portable urban uses (e.g. landscaping, toilet flushing), groundwater recharge, surface water augmentation and recreation and environmental uses. Each type of water reuse has its own water quality requirements which dictate the type of treatment processes needed. Depending on the type of water reuse, the treatment processes vary from conventional secondary treatment (i.e. biological oxidation and sedimentation) to advanced treatment such as reverse osmosis (at the extreme side). The cost of the treatment process increase from conventional treatment to advanced treatment accordingly. Filtration technique is a simple and relatively cheap physical process that can remove suspended particles and other constituents associated to it. The product of the filtration process can be used for many purposes. While many studies have been reported on this technology, its application with regards to Malaysian scenario has never been tested. A study is therefore proposed to look into the viability of this technique in polishing the secondary treated sewage for reclaiming the wastewater to suit the industrial process requirements.