
Waste Oil Thermal Cracking Plant

Aldwich Enviro Management Sdn Bhd

Kuala Lumpur, Malaysia

Publication date: February 2004

Published by Kress Enterprises Inc.

Overview:

About

**Aldwich Enviro Management Sdn Bhd
(AEM)**

Headquartered in Puchong, the principal activity of AEM is waste management, recycling, recovery, environmental services and transportation of environmental waste in relation to spent catalysts, tank cleaning and waste oils

AEM is a scheduled waste management company licensed by the Department of Environment ("DOE") to operate and manage an integrated scheduled waste facility in Kemaman, Terengganu. AEM is principally engaged as an operator of a waste recycling, recovery and reuse facility and provider of environmental related services.

Plant Location:

Near Kuantan,
Malaysia



**Used oil input
processing capacity**

30,000 metric
tonnes per year

**Commencement of
operations**

December 2004

AEM Project Director

Mr. Chan Kin Meng, Chief Operating Officer, AEM

Marketing Agent

Mr. Don Kress, President of Kress Enterprises Inc. (Sudbury Canada)
kei@vianet.ca

Strategic fit of this technology in Malaysia

An extensive petroleum and petrochemical industry exists along the east coast of peninsular Malaysia near the city of Kuantan. AEM presently operates their integrated scheduled waste facility in the area and performs various environmental services for industrial companies. AEM has secured its feedstock from many of these petrochemical companies. Presently the waste oil generated in this area is incinerated at a cost to the generator. The products from the waste oil cracking plant will be sold to a refinery or will be marketed directly to customers.



CADANGAN 'WASTE OIL TO DIESEL PLANT' (WODIP), KEMAMAN, TERENGGANU DARUL IMAN UNTUK TETUAN ALDWICH ENVIRO-MANAGEMENT SDN. BHD

ARTIST'S RENDERING OF AEM USED OIL THERMAL CRACKING PLANT

Contract arrangements

Thermal cracking process licensed from	Great Northern Processing Inc (GNP) (United States)	GNP developed their process over several years at their commercially operating plant in the US. The first license for their technology was to Sita s.a. of Belgium.
ROBYSTM Process licensed from	PED Inc. (Canada)	The ROBYSTM Process is a government of Canada owned technology licensed by PED Inc. CANMET Energy Technology Centre (CETC) is the inventor of the process. CETC is part of Natural Resources Canada
Engineering	SNC Lavalin Inc. (Montreal Canada)	SNC Lavalin Inc. completed the basic engineering.
	Best Wide Matrix Sdn Bhd (Kuala Lumpur, Malaysia)	The detailed engineering is being done by the Malaysian firm Best Wide Matrix Sdn Bhd, of Kuala Lumpur.
Equipment fabrication	Malaysian fabrication facilities	Various Malaysian equipment manufacturing facilities will be invited to tender on the project.
Construction management	Hexagon Tower Sdn Bhd (Kuala Lumpur, Malaysia)	Hexagon will be the general project contractor, erect the plant and manage construction.
Commissioning and startup	AEM	AEM will take over the plant at mechanical completion and perform all commissioning check and start up the plant with its own Operations Group.

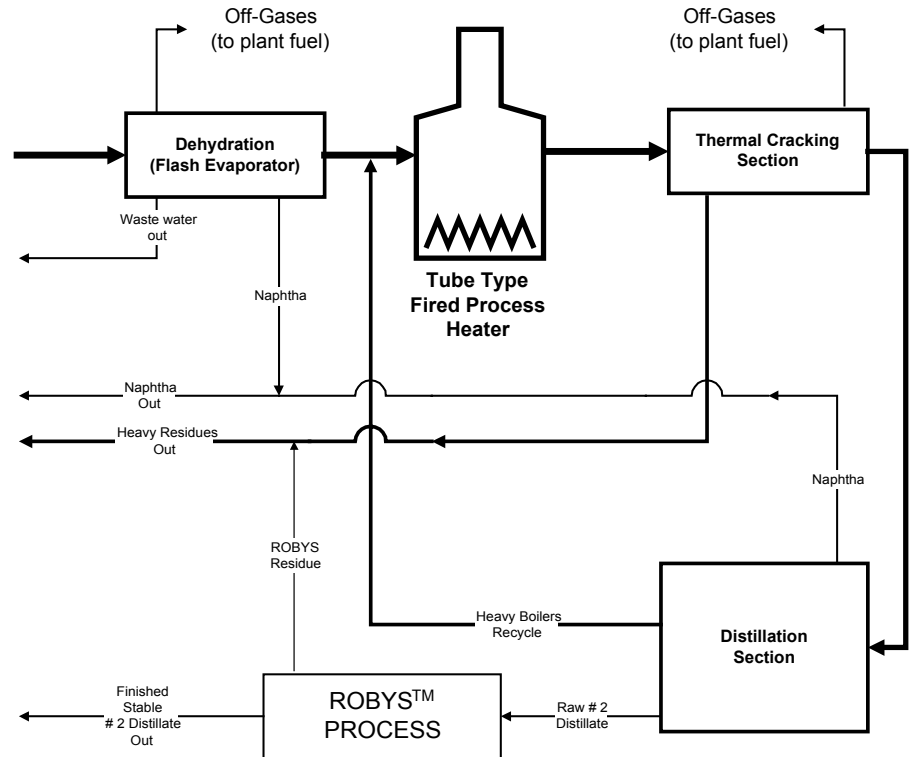
Process Overview

The GNP used oil thermal cracking process in conjunction with the ROBYS™ after-treatment process is the most technologically advanced method in the world for cracking used oil to primarily diesel fuel. The design targets a plant availability of about 80%.

The process is a completely contained refinery calibre design that incorporates petroleum industry standards in an industrial plant customized for the waste processing industry.

Once the plant is at operating temperature, it will be energy self-sufficient consuming its own plant off-gases and part of the naphtha. There will be a surplus of naphtha which would be marketable as a petrochemical feedstock. A waste water stream is an effluent from the plant. The water will be treated by AEM and will meet requirements prior to release to the environment.

The air emissions from the plant will meet Malaysian requirements since a thermal oxidizing furnace is used in the design.



Great Northern Processing Waste Oil Conversion Process			
SIZE	STATUS	DWG NO	REV
LETTER	Issued Confidential	Process Flow Block Diagram	1
Designed by:	C. Porter	Drawn by: D Kress	SHEET 1 OF 1

Environmental permitting and approvals

AEM is in charge of this aspect of the project. All necessary permits have been applied for and approved.