

IPC MEMBRANES

IPC® Membrane Bioreactor (MBR)

APICAL Palm Refinery, Indonesia

Project Background

The Apical SDS refinery is one of the largest installation on Sumatra Island to produce about 5.000 t of palm oil and biodiesel per day. Due to the increasing production capacity of the refinery complex the existing WWTP was not sufficient any more in terms of effluent quality and quantity. Furthermore due to the lack of fresh water Sea water desalination is essential to supply the industry with process water.

The decision was taken to transfer the existing plant into a MBR plant to increase the treatment capacity and effluent quality at the same time. In addition it is foreseen to recover about 50% of the MBR effluent as process water by RO to reduce the costs for process water supply.

BFM IPC Modules were selected for this challenging lighthouse project due to the excellent Flux performance, low operation costs, mechanical and chemical stability and the innovative high pressure backwash technology.

Project:	**Membrane Bioreactor (MBR) for industrial wastewater**
Customer:	**Apical, Dumai, (Indonesia)**
Application:	**Palm oil Refinery Waste Water**
Capacity:	**60 m^3/h**
Feedwater:	**Wastewater originating from refinery process, high in COD, FOGs**

IPC® membrane modules:

36 Modules (2,880 m^2)

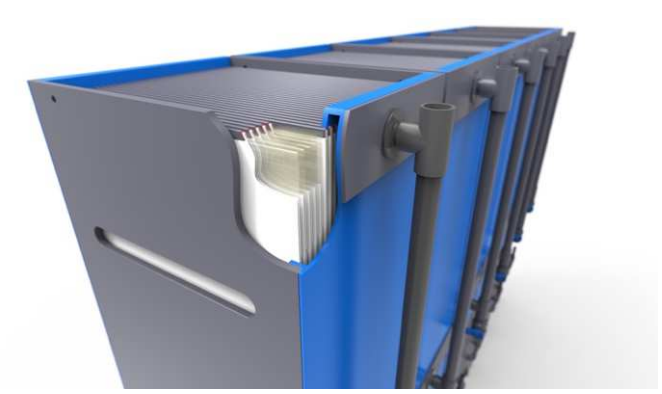
12 Triple Deck Modules

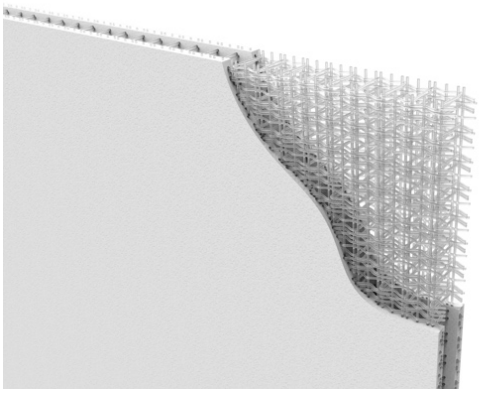
Start-up: **November 2019**

Project was executed by

AQUAKIMIA

Apical





Integrated Permeate Channel (IPC®) membrane modules

The IPC®-membrane modules are flat sheet membrane modules, which are constructed by many parallel-arranged membrane envelopes with defined distances between these envelopes. The individual envelopes are comprised of a 3D spacer fabric and coated with a PVDF ultrafiltration (UF) membrane which is anchored within the spacer. This anchoring allows the unique high pressure backwash of the IPC® membranes. As a result, these membranes are operated at a significantly higher operational flux than all other flat panel submerged membranes. The full-scale membrane bioreactor system delivers a higher capacity per footprint at a significantly lower operational expense compared to other competitors.

BLUE FOOT MEMBRANES

reducing the world's water footprint

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