

CLIENT:

Visy Paper

LOCATION:

Smithfield, NSW

SERVICE:

Anaerobic Plant

CAPACITY:

20,000 Kg COD/day

PRODUCT:

BIOPAQ® IC

COMPLETION DATE:

July 2008

CONTACT:

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Visy Paper Anaerobic Plant

Visy Paper contracted Aquatec Maxcon to design and construct a large anaerobic plant at their site in Smithfield, NSW. Paques BV, the supplier of the BIOPAQ® IC and long term partner of Aquatec Maxcon have delivered several plants with similar wastewater, managing the high calcium content of this recycle paper successfully.

The plant design was preceded by an onsite pilot trial with an anaerobic pilot plant from Aquatec Maxcon.

The full scale plant is designed to treat 20,000 kg COD/day and has a calcium concentration of up to 800 mg/L. The treatment process consists of a Balance tank, IC reactor of 800 m³ and diameter of 6.5 meters, Aeration tank, DAF as well as a WAS collection tank.

The Visy wastewater contains a high concentration of sulphate, which results in a biogas with 10,000 ppm of hydrogen sulphide. The plant incorporates a Thiopaq® biological desulphurisation unit, which dissolves the H₂S from the biogas in a scrubber.

This H₂S gets converted into elemental sulphur in the Thiopaq unit which has minimal power and chemical cost, whilst removing over 99% of the H₂S. This was the first Thiopaq® application in Australia.

One week after commissioning in July 2008, the plant achieved a significantly better than required effluent quality which produces 250 – 300 m³/hour of biogas. The client is currently considering incorporating Gas MicroTurbines from Aquatec Maxcon for power generation from the biogas.



THE BIOPAQ® IC

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