

The Combined Sharon/Anammox Process

Wastewater treatment management, alongside many other industries, is seeking to attain a higher degree of sustainability for its processes by focusing on new technologies which minimise the consumption of resources or even recover them from the wastewater.

Conventional removal of ammonium requires usually large amounts of energy for aeration and organic carbon for denitrification. This report focuses on making the nitrogen-removal process more sustainable. This can be achieved by a partial oxidation of ammonium to nitrite, after which the nitrate produced can be converted into nitrogen gas with the rest of ammonium under anoxic conditions.

The treatment of nitrogen-rich water can be carried out beneficially by a combination of the Sharon process with the Anammox process. In this combined process less than 50% of the aeration energy is needed, no COD is required and an insignificant amount of sludge is produced. In this Report the potential of using this technology for the treatment of water arising from sludge treatment at a municipal wastewater treatment plant (WWTP) is evaluated and the results of the operation of the system are described in detail. This reject water contains a significant fraction of the N-load towards the wastewater treatment plant. The results are used in an economic evaluation of a potential full scale installation.

The *Combined Sharon/Anammox Process* Report will provide an invaluable source of information for all those concerned with the efficient and sustainable treatment of wastewater including plant managers, process designers, consultants and researchers.



Publication Date: 30/09/2001

ISBN13: 9781843390008

eISBN: 9781780402178

Pages: 64

Print:

Standard price: £89 / €111 / \$134

Member price: £67 / €83 / \$100

eBook:

Standard price: £89 / €111 / \$134

Member price: £67 / €83 / \$100