



AL ANSAB – OMAN

- **END USER:**
Haya Water - Oman

- **CLIENT:**
Haya Water - Oman

- **INDUSTRY:**
Waste Water Treatment

- **DATE OF CONTRACT AWARD:**
2005

- **CONTRACT COMPLETION:**
2008



INTRODUCTION:

ACWA was awarded the technology contract to supply the membrane units, undertake process design and assist with detailed design, engineering, installation and commissioning of one of the worlds largest submerged Membrane Bioreactor in Muscat-Oman.

DESCRIPTION:

The SMBR plant, which is thought to be the largest in the world, will treat an ultimate population equivalent of 900,000 – some 220,000m³/day. This initial stage will treat flows of 76,000m³/day using 304 Kubota EK400 double-deck MBR modules – 121,600 panels in all.

DESIGN PARAMETER:

- Gravity operation of membranes.
- 8 No. tanks, peak daily flow treatable with 7 no. tanks.
- Completely automatic chemical cleaning (press button).
- 5/10 year comprehensive membrane life.
- Each set of 4 no. membrane units coupled together to result in large savings in pipework and valve costs.
- On site test rig to enable easy checking of membrane performance.
- BNR design for nitrification.

SCOPE OF SUPPLY:

During treatment, screened and de-gritted wastewater flows by gravity through the eight MBR tanks. Sets of four membrane units are coupled together to give significant savings in pipework and valve costs, and an automatic chemical cleaning system ensures minimum fouling and system downtime.



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