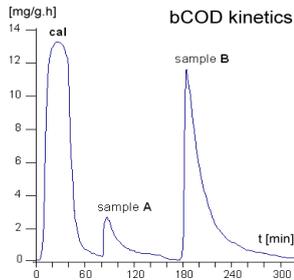


Model Engineering nv/sa (ME) shrinks the carbon and water footprint at the source and converts organic waste and wastewater to green energy & blue water for reuse in the most economic and sustainable way.

ME is an inventive consultancy and engineering firm with a unique approach, advanced biotechnology and over 39 years worldwide expertise in sustainable water solutions for a broad range of industries and municipalities.



Model performance: the key to generate more with less

Smart models drive ME's advanced biological conversion technologies **AD+™** and **AS+™** and its comprehensive **5D-WM™** methodology to generate **more with less**: **more** methane and water for reuse with **more** efficiency in **less** space and with **less** energy use and waste. ME's smart models cut costs and carbon + water footprint.

AD+™ converts more organics to green energy with less ...

AD+™ converts **more** organics in wastewater and sludge into more methane to replace more fossil fuel for heat and power generation. This green energy yield maximizes revenue and ROI.

At up to 99% conversion efficiency **AD+™** also results in far **less** energy consumption and waste downstream to further shrink the carbon footprint of the whole treatment plant.



AS+™ produces more blue water with less ...

AS+™ is the **ultimate** activated sludge (AS) system to generate **superb water quality** for reuse at the **lowest cost** in **new** and **existing** (retrofit upgrade) biological sewage and wastewater/effluent treatment plants.

AS+™ successfully cleans municipal sewage and industrial wastewater from drink, food, chemical, pharmaceutical and pulp/paper industries since 1990. More industries and all cities would benefit from **AS+™**.

The **AS+™** blue water formula :

- synergy of super bugs
- in high density flocs
- up to 80% biosorption
- cyclic regeneration
- super clarification

Typical **AS+™** water quality for direct & indirect reuse :
BOD < 3 mg/l, COD < 30 mg/l, TSS < 5 mg/l, turbidity < 0.3 NTU

In addition, **AS+™** cuts back up to 50% on **energy** consumption and **waste sludge** production without adding chemicals.

As a result, an investment in **AS+™** pays itself back quickly, especially in case of water reuse by **multiplying** the **service life of RO membranes**.

"We do believe the **AS+™** technology has high potential for Asia, including for treatment of industrial effluent of paper mills.

We will use the available opportunities to promote and disseminate it both to ADB clients and within the ADB community."

Sergei Popov,
Senior Environment Specialist
Asian Development Bank
March 13th, 2009





5D-WM™ sustainable water management shrinks your water footprint by drastically reducing fresh water consumption and wastewater production - even down to zero liquid discharge (ZLD) - while saving energy and costs on the way.

5D-WM™ explores and integrates 5 dimensions to shrink your water footprint:

D1 = water pinch : pinching direct fresh water consumption to what is needed.

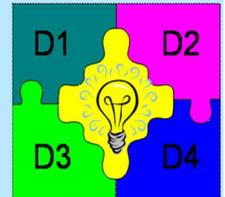
D2 = substitute fresh water : creating a balanced mix of alternative water sources.

D3 = multiple use : using water multiple times in different processes.

D4 = redesign & regeneration: cycling water within units and processes.

D5 = closing the loop : adding **AS+™** for sustainable water reuse at the lowest total cost either directly (short loop) or via groundwater recharge (long loop).

Over 50% savings on fresh water consumption and wastewater discharge have been achieved in many industries with minimal capital expenditure and maximal ROI.



Worldwide, ME cooperates with prominent **clients & partners** for **water reuse & green energy** in



- municipal sewage treatment, drinking water production and groundwater recharge
- breweries, malting, beverages, food and dairy industries
- fermentation, starch, sugar and alcohol industries
- pharmaceutical, chemical and petrochemical industries
- pulp, paper, rubber, palm oil, textile, rendering and various agro industries
- machinery, building products, wood processing, printing, paint, glue, ...

Besides advice, technology, design and engineering, ME also supplies key project services as needed such as on-site audits, testing, planning, detail engineering, procurement support, site inspections, commissioning guidance, process start-up and tuning, staff training and operation support.

ME cooperates worldwide with leading R&D institutions, consulting engineers, contractors and others in water treatment, wastewater treatment and/or green energy production.



more information ?

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MODEL technology

+40 years worldwide expertise