



**Concorde**  
Water Supplies

IRELAND

FRANCE

INDIA

# Concord Water Supplies, India

## Technologies

- Sea Water Desalination Plants (SWRO), *containerized solutions and fixed plants*
- SWRO plants, *w/patented wind-diesel renewable energy*
- Ultrafiltration Plants, *decontamination of drinking water, sewage water re-use*
- WWTP, *containerized solutions*
- WWTP, *municipal, concreted solutions*
- WWTP, *associated with zeolite for ammonia elimination*
- WWTP, *depollution of textile tanning industry effluent w/ZLD(zero liquid discharge)*
- WWTP, *w/MBR membranes for sewage water re-use*
- WWTP, *w/External UF (ultrafiltration) skid for water re-use*
- DAF-units, *associated with WWTP as pre treatment*
- *Ceramic membrane filtration*

- Physical/chemical turn-key depollution skids
- Industrial Cross-Flow Vacuum Filter, *dewatering of sewage effluent*
- Sludge dewatering device, *with Archimedes Screw*
- Heavy metal elimination systems
- Demineralizing plants, *boiler water make-up for thermic power plants*
- Demineralizing plants, *process water for semiconductor industry*
- High pressure pumping skids for water transfer
- High pressure pumping skids for sea water desalination
- Multistage vertical pumps for process water and brackish water desalination
- UV-light sterilizing units
- Oil-absorbing cartridges
- Wounded polypropylene prefiltration cartridges
- Gradient density prefiltration cartridges
- Water resource characterization, development and protection and related studies

# CONCORD WATER SUPPLIES LTD

## COMPANY OVERVIEW

Our Company was founded in Ireland in 2007 but benefits from over **37 years of combined experience** in the water industry. Our objective is to address and solve all of your water related challenges through the implementation of **innovative** and **sustainable solutions** for the development of **affordable, high quality water**.

We are committed to create **systems that become part of a life** sustaining process for **developing world countries** and that contribute to the further **development of the wealthier ones**.

CWS **technical expertise, work, business and management experience** allows us to cover a broad range of services and products relating to water treatment...**i.e. for drinking water, sewage effluent water reuse through MBR**, including **depollution of industrial wastewater streams and sea water desalination** .



# CONCORD WATER SUPPLIES LTD

## HOW WE HELP

Concorde Water Supplies Ltd. (CWS) is a Franco/Norwegian owned Company based in Ireland. CWS provide innovative tailor-made water treatment systems and solutions to meet our clients' requirements:

Our Core business consists of 4 main areas describing by services as follows:

- Wastewater Treatment and Re-Use through the implementation of Membranes Bio-Reactors (MBR);
- Sea Water Desalination - for the production of fresh water from sea and brackish waters using Sea Water Reverse Osmosis (SWRO);
- Water Filtration - Production of potable water from surface water, groundwater or reclaimed water via Ultrafiltration (UF) or Nano Filtration (NF) Technologies;
- Ballast Water treatment via Filtration and High power UV irradiation.



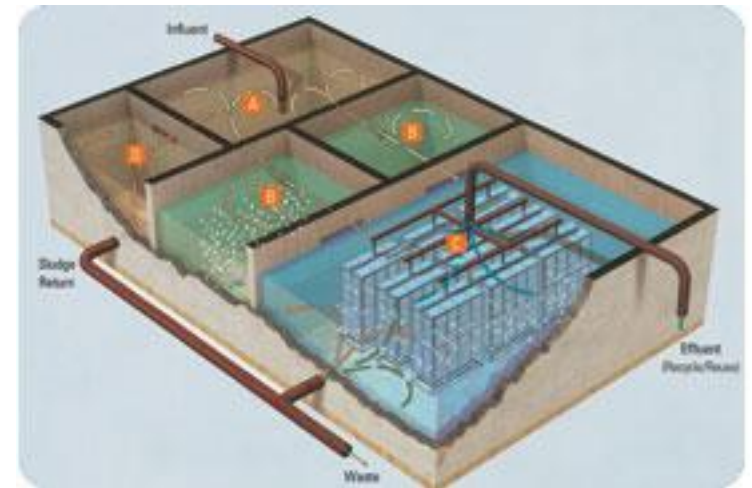
Mobile Water Treatment for Desalination/Waste water

# CONCORD WATER SUPPLIES LTD

## HOW WE HELP

Our strengths are our unique abilities to:

- Understand your needs and provide you with tailor-made solutions;
- Guide you on the technical requirements of your planning application process;
- Reduce the footprint and construction costs of your treatment plant in comparison with conventional treatment plants;
- Substantially reduce your plant maintenance costs;
- Provide you with record low energy consumption plants;
- Minimise the disturbance to you during our installation on-site;
- Deliver our self-contained plants anywhere in the world;
- Provide you with high efficiency water treatment plants



# CONCORD WATER SUPPLIES LTD

## SERVICES

In order to assist our clients through their planning application and/or their requirements, we have developed a range of services best suited to ensure that our clients will be fully compliant with the existing legislation. We can therefore address any type of water related studies or discharge licences that may be required as part of the planning process with the local authorities. This offers the double advantage of ensuring long-term reliability and sustainability of any (waste)water treatment plants and get you moving forward with your project!

When necessary, CWS recommend a 2-phase approach to your projects to help insure its good progress and minimise any potential risk of failure. As such, our approach is to provide you with the following range of services:

# CONCORD WATER SUPPLIES LTD

## SERVICES

### CONSULTANCY

This first phase is aimed at understanding our clients' specific requirements in terms of water and addresses any water related requirements in terms of planning. This will:

- Facilitate the planning permission by quantifying any potential risk of impact to the environment arising from the discharge of effluent from the proposed development.
- Help in the determination of the capacity and the most suited type of facility required to better address and solve your water related challenges;

Typical consultancy works could include hydrogeology and hydrology, geotechnics and geophysics, environmental studies. A report summarising the results of our findings is then submitted to our client. This is often a critical phase when a planning permission is thought.



# CONCORD WATER SUPPLIES LTD

## SERVICES

### SCOPE & DESIGN

Based on existing information (if available), CWS will assess the capital and operating costs associated with water treatment: Operating costs, energy costs and amortisation are presented in a manner which is clear and understandable to the neophyte with the view to speed up decision making. A detailed and comprehensive proposal is then submitted to the client that includes a comparison between conventional plants and CWS energy efficient plants.



# CONCORD WATER SUPPLIES LTD

## SERVICES

### TRAINING

As part of our services, CWS offer proper training and certification to the staff that will run your plant. Usually, this is carried out at the commissioning phase of the project.

This training is designed to ensure that the basic maintenance of a plant can be carried out by the staff mentioned above so that our customers become completely autonomous in the running of this latter. Operational Manuals are provided with each of our plants.

Should your staff change overtime, we can provide additional training and certification for your new staff.



# CONCORD WATER SUPPLIES LTD

## SERVICES

### OPERATION & MAINTAINENCE

Should it be required, CWS can take over the running and maintenance of any of our plants and in a cost effective manner. This is achieved through the use of remote control systems.



# CONCORD WATER SUPPLIES LTD

## SERVICES

### OTHER SERVICES

In addition to advanced water technology, we also assist on the following:

- Consultancy services in the field of hydro-geology (development, assessment and protection of the water resource) , depollution and wastewater treatment assessments;
- Integration of high energy consuming plants (such as SWRO) with renewable energy through a patented wind-diesel solution from their Danish partner, one of the European pioneers within the offshore wind electricity.

# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

### WASTEWATER TREATMENT AND REUSE THROUGH MEMBRANE BIO-REACTOR (MBR):

CWS can design, build and operate submerged or external MBR plants to suit your needs.

The advantages of the process are multiple:

- 50% smaller footprint and up to 35% reduction in capital cost than a conventional tertiary treatment plant ;
- Energy savings due to the absence of requirement for aeration lagoons, clarifier, sand filter and disinfection;
- Lower waste disposal cost due to a reduction in sludge production;
- Cost effective retrofit for existing facilities;
- Record Low energy consumption ( $\sim 1.33 \text{ kWh/m}^3$  of clean water produced);
- Low maintenance costs.

To meet your water quality requirements, the MBR system will be followed by the addition of a supplementary treatment stage (nano-filtration, Ozone or Granulated Activated Carbon etc.). Each plant is tailored to your needs !



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

### SUBMERGED MEMBRANE BIO-REACTORS

Submerged Membrane Bio-Reactor Technology is a sound technical approach for producing high quality effluent from wastewater.

This technology offers a compact built purification system combining the biological degradation step with a membrane separation step. This combination offers several significant advantages over a conventional activated sludge system, such as a higher biomass concentration and less sludge carry-over. The higher biomass concentration results in a more compact system. The decrease in sludge carry-over reduces the need of post-treatment if the effluent.

This technology allows an increase in the concentration of the sludge (Bio-Reactor) and enables the production of high quality effluents (Membrane Filtration), free of suspended solids, most pathogen bacteria (including cryptosporidium and Giardia Cyst). This offers a reliable new water source for various beneficial uses, from relatively simple agricultural irrigation, to the recycling of industrial process water, to complex potable water reuse.



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

The addition of a supplementary treatment stage (nano-filtration, UV, Ozone or Granulated Activated Carbon) would allow the production of an even higher quality effluent (up to potable water status).

CWS can design and implement MBR plants: We use modular membrane cassettes that are submerged in the activated sludge reservoir. Each cassette comprises 16.8m<sup>2</sup> of membrane surface area and produces 5m<sup>3</sup>/d of clean water (cut out range of polyethylene fibers being of 0.4 µm). The cassettes are mounted on frames with capacities ranging from 30m<sup>3</sup>/d (6 cassettes) to 700m<sup>3</sup>/d (140 cassettes). A configuration of several large frames in parallel allows for unlimited clean water production capacities.

Membrane cleaning operations are carried out every 6 months (on average) by immersing the frames with membranes into a cleaning tank for 2 to 4 hours. This latter is automated and fed by acids and bases that auto neutralize at the end of the clean-up operation and are reinjected to the WWTP.



# CONCORD WATER SUPPLIES LTD

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# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

### EXTERNAL MEMBRANE BIO-REACTORS

External Membrane Bio-Reactor Technology is a sound technical approach for producing high quality effluent from wastewater.

This technology a compact built purification system combining the biological degradation step with a membrane separation step.

This combination offers several significant advantages over a conventional activated sludge system, such as a higher biomass concentration and less sludge carry-over.

The higher biomass concentration results in a more compact system. The decrease in sludge carry-over reduces the need of post-treatment if the effluent.

CWS external MBR configuration offers an ultrafiltration (UF) membrane solution placed outside the reactor allowing the maintenance of the plant to be simple and clean. The side stream set-up also allows easy expansion of existing WWTP. Energy consumption is at the same level of submerged membranes or even less, due to the efficient usage of process conditions for flux enhancement.



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

Our external MBR allows true Ultrafiltration (0.03  $\mu\text{m}$ ) with a permeate free of suspended solids, pathogen bacteria, most of viruses and toxic drugs. This offers a reliable new water source for various beneficial uses, from relatively simple agricultural irrigation, to the recycling of industrial process water, to complex potable water reuse. The addition of a supplementary treatment stage (nano-filtration, UV, Ozone or GAC) would allow the production an even higher quality effluent (up to potable water status).



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - WASTE WATER

OKCHUN MBR Plant: Municipal Waste Water Treatment Plant

Location: Okchun city, Chungchungbukdo, Korea

Capacity: Daily average flow 18,000 m<sup>3</sup>/day

Design flux: 0.3 m<sup>3</sup>/m<sup>2</sup> day

Capacity per unit frame: 720 m<sup>3</sup>/day

Number of cassettes in one frame: 144



DALSUNG MBR Plant: Industrial Waste Water Treatment Plant

Location: Dalsung Industrial Complex, Daegu city, Kyuongsangbukdo, Korea

Capacity: Daily average flow 25,000 m<sup>3</sup>/day

Design flux: 0.3 m<sup>3</sup>/m<sup>2</sup> day

Capacity per unit frame: 600 m<sup>3</sup>/day

Number of cassettes in one frame: 112



# CONCORD WATER SUPPLIES LTD

## PRODUCTS- DESALINATION

### SEA WATER REVERSE OSMOSIS (SWRO) PLANTS:

CWS specialise in low-energy consumption ( $2.40 \text{ kWh/m}^3$ ) desalination plants with capacities ranging from  $100\text{m}^3/\text{day}$  to  $50,000\text{m}^3/\text{day}$  as follows:

$100\text{m}^3/\text{d}$  to  $6,000\text{m}^3/\text{d}$ : Our plants, including pre-treatment, post treatment and clean in place facilities are assembled in 20 feet and 40 feet ISO Reefer Containers.

Beyond  $6,000\text{m}^3/\text{d}$ : Our plants need to be built on-site and civil engineering works are required.

Our containerised plants are built in our facility in Marseille, France. Each plant is thoroughly tested prior to the shipping to its final destination. This allows delivering a "ready to plug" solution where and when it is needed.



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - DESALINATION

The 5 main benefits for our customers are as follows:

- No need for expensive and time-consuming civil engineering costs (Containerised solutions);
- Minimal disturbance during the installation of our containerised plants - A simple concrete slab would be required to unload and support our treatment plant;
- An economic treatment plant ready to produce - all what is required on our client's part is to arrange for seawater intake and electrical supply;
- Our 18 inch membranes offer extreme compactness and high production yield from each element of 260 m<sup>2</sup> surface area, compared to standard 8 inch membranes with only 37 m<sup>2</sup> surface area;
- High efficiency salt removal rate with our membrane (99.6%).



# CONCORD WATER SUPPLIES LTD

## PRODUCTS - ULTRA FILTRATION

### ULTRAFILTRATION PLANTS

Ultrafiltration is used to treat surface water, groundwater and wastewater as either a primary treatment or as a pretreatment to nanofiltration and/or reverse osmosis.

Membrane filtration offers many advantages over conventional water treatment by sedimentation and sand filtration, notably. The technology used by CWS replaces conventional pretreatments for potable applications, groundwater recharging and water recycling. The main benefits of our plants are as follows:

The cut out range of our membranes is 0.015  $\mu\text{m}$ . This provides the ability to efficiently and reliably achieve high rates of removal of pathogenic microorganisms such as Giardia and Cryptosporidium as well as most viruses;

- Each membrane covers a surface area of 46  $\text{m}^2$  which is equivalent to the production of 60  $\text{m}^3/\text{d}$  of potable water.
- Our ultrafiltration plants can be containerised and can accommodate production rates of up to 3,000 $\text{m}^3/\text{d}$  per 40feet containers;
- This technology only requires low pressure water feed (2 bar), which equates to very low consumption cost of €0.03/ $\text{m}^3$ .



# CONCORD WATER SUPPLIES LTD

## PRODUCTS – BALLAST WATER

### BALLAST WATER TREATMENT SYSTEM

The International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, mandates that all ships that carry ballast water install a treatment system by the year 2016. Ratification and implementation of the United Nations' International Maritime Organization (IMO) ballast water management convention will soon make it a criminal act to discharge untreated ballast water. From the date of implementation (2009), ships will be required to treat ballast water discharge to achieve less than 100cfu/100mL of Enterococci and less than 250cfu/100mL of Escherichia Coli. Vibrio Cholerae (O1, O139) should be less than 1cfu/100mL or less than 1cfu/g of zooplankton samples.

Benefitting from the legacy of Hydrotech France and over 20 years of experience in designing water treatment solutions for the maritime industry, Concorde Water Supplies (CWS) have developed a system that meets the stringent requirements put forward in the 2004 convention. Our system consists of solid separation (filter) followed by UV irradiation:

- The screening filter is designed to remove organic matter to meet D-2 standard and;
- The High Power UV system is aimed at inactivating marine organisms, viruses and bacteria, without affecting the normal operation of the ship.



# CONCORD WATER SUPPLIES LTD

## PRODUCTS – BALLAST WATER

Ballast water is treated both during ballasting and de-ballasting to ensure the dual effect. All of our water ballast systems are developed and manufactured for installations aboard ships and tailored to your needs. For retrofit purposes, they can be delivered in containers allowing easy installation on deck or other available spaces. In addition, our systems allow:

- Small adaptable to requested flow rates - 50 m<sup>3</sup>/h - 7000 m<sup>3</sup>/h;
- High screening efficiency;
- Fully automatic self-cleaning system, efficiently handles heavy dirt load in raw water;
- Low operating pressures meet parameters of existing ballast water pumps;
- Uninterrupted filtered water supply during flushing;
- Long service life due to anti-corrosion protection coating and stainless steel screen;
- Low running and low maintenance cost.



# CONCORD WATER SUPPLIES LTD

## ADDITIONAL BENEFITS

### REDUCED MAINTAINANCE

#### MBR Technology

Reduction of the maintenance (by comparison to other MBR systems) is achieved by using air scouring injected from the bottom of the membrane support frame. The ascending air bubbles act with a cross flow cleaning effect, permanently outside the membrane fibers. This important air scouring efficiency avoids implementing sequential inside-out chemical fiber back-wash system, which would increase the plant capital cost.

Every 6 months, the frames containing the MBR cassettes are immersed inside a cleaning tank 2 - 4 hours to remove the creation of filter cakes, which greatly facilitate the maintenance of the system. Polyethylene fibers resist against pH upsets, hence their expected life time is 8 - 10 years.

Remote control system (in all our plants): Using this feature, the plant can be operated remotely. This has the beneficial advantage of not having an operator on-site as all flows can be monitored and supervised remotely.

If off-limits parameters are reached, the plant will shut-down automatically and a message will be sent to the operator.



# CONCORD WATER SUPPLIES LTD

## ADDITIONAL BENEFITS

### SWRO Technology

The flows from the well pump, the booster and the high-pressure pump can be adjusted remotely by signals to the frequency converters. Water temperature, salinity and pressure in different flows can likewise be monitored and historical data is saved for printout graphs showing the plant operation at any given time.

Our SWRO high-pressure pumps are piston radial in super duplex and SMO 254 stainless steel, with a 95 % efficiency, and running 3 years maintenance free, under normal conditions. They have a proven field track record and can easily be serviced, which requires an average 4 hours intervention. HP sea water pipe lines are from SMO 254 SS. Low pressure sea water pipe lines are from ABS or PVC.

Frequency converter for soft start operation & automation: The high-pressure pumps are controlled by frequency converters, which also provide soft start for the plant and thereby prolong the lifetime of all vital items. The automatic start and stop function of the plant is likewise controlled by the submersible well-pump and the sensors in the external holding tank.

# CONCORD WATER SUPPLIES LTD

## ADDITIONAL BENEFITS

### ENERGY SAVINGS

CWS continuously seek the latest proven technologies available with the view to develop and implement solutions that are technologically and financially reliable and sustainable. In order to lower the energy costs, CWS can build its plants using one or a combination of both of the following items:

Low pressure Flows (MBR): Our MBR technology uses only gentle transmembrane pressures, such reducing the running costs and prolonging the membranes Life.

Energy Recovery Systems (ERS) for SWRO plants: such as Pressure Exchangers (PX) are used by CWS in some of our SWRO plants (capacity dependent). The PX alone allows up to 70% Energy Saving. With the benefit of a PX, the production of 1m<sup>3</sup> of water drops from 7 - 8kWh down to 2.2 – 3kWh (depending on site conditions such as temperature etc.).

Renewable Energy: In order to further reduce the energy costs and on a case by case basis, CWS would consider the use of Renewable Energy to power its plants. Site conditions which present wind velocities above 9m/s should be considered for power production from windmills. Upon demand from our clients, we could link up with a network of reputed Companies throughout the World.

# CONCORD WATER SUPPLIES LTD

## ADDITIONAL BENEFITS

The benefits are multiple:

- Systems that produce electricity out of renewable energy (windmills, Hydrogen etc.) currently benefit from governmental grants in many countries,
- With the advance in technology, the recovery rate of the new systems is now very high by comparison with what it was only 5 years ago (and ever increasing).

Building desalination units that would be 100% self sufficient in terms of energy is now possible but would depend on site location and finances. Through a network of partner companies, CWS can implement any of the systems mentioned above, providing that the location is suitable.

# CONCORD WATER SUPPLIES LTD

## WHY CHOOSE US

You want to reduce your water bill, intend to build a new (waste)water treatment plant or need to upgrade your existing plant.

No matter what your need, with over 37 years of combined experience, we can help you solve any water treatment related challenges you may have.

### EXISTING TREATMENT PLANT

We can retrofit our own technology, thus ensuring that you meet the existing and future standards. This will help you to:

- Reuse your existing plant;
- Make the best use of the space you have available;
- Avoid the building costs a new plant would incur - thanks to cost effective modifications of existing facilities to meet increasingly more stringent requirements for effluent discharge permits;
- Produce water of such good quality that it can be reused in your production processes – itself leading to ongoing savings by reducing water rates.

### NEW TREATMENT PLANT

We can assist you with your planning application (abstraction licence or discharge licence) and provide a Design-Build-Operate service. In this way, we can:

- • Substantially reduce construction costs in comparison to a conventional wastewater treatment plant;
- • Design, build and operate (if necessary) a plant tailored to your needs with scalability for growth (if requested);
- • Produce water of such good quality that it can be reused in your production processes leading to ongoing savings by reducing water rates

# CONCORD WATER SUPPLIES LTD

## WHY CHOOSE US

Our turnkey projects will :

- Assist you with your planning application and environmental requirements;
- Ensure your plant is compliant with the existing regulations;
- Train and certify your staff with an option to train staff on an ongoing basis;
- Provide the option of offsite remote controlled maintenance;
- Reduce your costs – both initial build and ongoing energy, running and maintenance costs;

CWS work for both the public and the private sectors. WE help your companies and organizations by providing sustainable water supplies and wastewater treatment plants for their existing and/or proposed developments. The sectors we service include:

- Agriculture;
- Local Authorities & Government Bodies;
- Construction Industry;
- Manufacturing;
- Naval fleet
- Mining;
- Electronics;
- Petroleum/Chemical Industry;
- Food & Beverage;
- Pharmaceutical;
- Golf Courses;
- Shopping Centres & Malls;
- Hotels, Resorts & Leisure Centres;
- Waste Management Companies.



# CONCORD WATER SUPPLIES LTD

## THE PEOPLE

KOLBJORN OLSEN,

Mr. Olsen was the Managing Director of Hydrotec France for 9 years until he sold it to an American Company (REGENAT) in 2000. Kolbjorn has been a successful consultant for over 25 years and is now using his expertise for Concorde Water Supplies Ltd

Mr. BRUNO TELLIARD

Mr. Telliard set up his own consultancy, Geosprings in 2003. Two years later he successfully merged with BMA GeoServices Ltd. for which he still acts as a Director and Head of the Environmental DPT.



# CONCORD WATER SUPPLIES LTD

## THE CLIENTS

CLIENTS	COuntry	INSTALLATION	CAPACITY M3/24H
CORK COUNTY COUNCIL	Ireland	Inland	90
WILH. WILHELMSSEN	Norway	SHIP	6
K/S BERGSHIP CO A/S	Norway	SHIP ARETIC SURVEYOR	122
HAUGESUND MEK. VERKSTED	Norway	SHIP SOUTHERN SURVEYOR	11
K/S/ A/S/ HAVFANGST	Norway	SHIP PERLON	6
ROOYAL NORWEGIAN NAVY	Norway	SHIP HM KING OLAV V	10
WILH. WILHELMSSEN	Norway	SHIP TENDER TARTAN	10
HJORUNGAVAG VERKSTED	Norway	SHIP MYHRE SEADIVER	10
SHIPOWNER T. OLSEN	Norway	SHIP M/S SVITHUN	10
MARITIM SVEISESERVICE	Norway	SHIP RINGVASOY	3
KNUT KNUTEN OAS	Norway	SHIP KNUT CONSTRUCTOR	20
KIRKSAETEROREN	Norway	SHIP	2
REKSTEN MANAGEMENT	Norway	SHIP T/T SIR CHARLES HAMBRO	18
LONGVA MEK. VERKSTED	Norway	SHIP BERGHOLM	3
THE NORWEGIAN SCHOOLSHIP	Norway	SORLANDET	6
SOLSTRAND SLIP	Norway	SHIP RANGOY	2
A/S BATBYGG	Norway	SHIP M/S VERLAND	2
KYSTVAGEN VERFT	Norway	SHIP BJORN SNORRE	2
OLAV THON	Norway	ONSHORE ILES CANARIES	5
A/S BATBYGG	Norway	SHIP K/S A/S HAEROYVERING	12
KAARBOS MEK. VERKSTED	Norway	SHIP M/S SORVAER	5
SHIPOWNER A. JENSEN	Norway	SHIP	3
		<b>GEIR JOHANSEN</b>	
SHIPOWEN H.A. STROM	Norway	SHIP BOREVAG	2
MJELLEM & KARLSEN	Norway	SHIP	15
SHIPÖWNER STOLT NIELSEN	Norway	SHEARWATER CAPE	11

GECO	Norway	SHIP GECO RHO	11
GECO	Norway	SHIP GECO MY	11
K/S A/S OCEAN SURVEYOR	Norway	SHIP M/S OCEAN	11
UGLAND SHIPPING MANAGEMENT	Norway	SHIP M/S TENDER CONTEST	17
SHIPOWNER ALF HANSE	Norway	SHIP ALFONS JR.	3
KAARBOS MEK. VERKSTED	Norway	SHIP M/S NORSEL	48
LONGVA MEK. VERKSTED	Norway	SHIP M/S HOLBERG	45
BRDR. HUKKELBERG	Norway	SHIP M/S VIKAVAG	3
A/S BATBYGG	Norway	SHIP M/S FORDE	3
ACO TRADING	Norway	SHIP ARETIC HELIOS	3
A/S BATBYGG	Norway	SHIP M/S DOGGER	3
FLATSETSUND MEK.	Norway	SHIP M/S KVALNES	3
LANGSTEN SLIP & BATBYGG	Norway	SHIP ANDRIAS I HVANNASUNDI	22
BRATTVAG SKIPSINNREDNING	Norway	SHIP OLAF I GARDASTOVI	90
THE ROYAL NAVY'S INSTITUTE OF RESEAUCH	Norway	SHIP MARJARA	11
LARSNES MEK. VERKSTED	Norway	SHIP VESTTRAL	68
KRISTIANSUND MEK. VERKSTED	Norway	SHIP DROTTLAND	68
SHIPOWNER E.FORLAND	Norway	SHIP SEISVENTURER	35
LONGVA MEK. VERKSTED	Norway	SHIP HAVSKJELL VIKING	90
SOVIKNES VERF	Norway	SHIP SEABAY ALPHA	90
K/S A/S TRALBAS	Norway	SHIP TRALBAS	6
TRAENA LOCAL COUNCIL	Norway	ONSHORE ILE EN MER	136
SENTRUM DIESEL	Norway	SHIP JOHAN RUUD	6

# CONCORD WATER SUPPLIES LTD

## THE CLIENTS

MJELLEM & KARLSEN	Norway	SHIP M/S BARDHAUS	90
H.E. NORDVEIT	Norway	SHIP M/S SILFJORD VAERING	3
NORWEGIAN SCHOOLSHIP	Norway	SHIP CHRISTIAN RADICH	11
LANGSEN SLIP & BATBYGG	Norway	SHIP POLAR PRINCESS	90
FISKERSTRAND VERFT	Norway	SHIP VOLSTAD VIKING	90
DANYARD	Denmark	SHIP UKSNOY	500
KRISTLANDUND MEK. VERKSTED	Norway	SHIP M/S LADY LINDA	6
CRYSTAL STAR INC.	U.S.A.	SHIP CRYSTAL VIKING	30
LANGSTEN SLIP & BATBYGGERI	Norway	SHIP M/S FAME	90
LANGSTEN SLIP & BATBYGGERI	Norway	SHIP ICE KING	90
CRYSTAL STAR INC.	U.S.A.	SHIP CRYSTAL CLIPPER	30
NESTLE NORGE	Norway	SHIP	6
SHIPOWNER K.G. JEBSEN	Australia	SHIP TANGA	30
SHIPOWNER K.G. JEBSEN	Golfe Persique	SHIP KARABI	20
NORSKE SHELL	Norway	OIL DRILLING RIG	90
BODO LOCAL COUNCIL	Norway	ILE EN MER OSLAND	100
VIK LOCAL COUNCIL	Norway	ILE EN MER ISLAND	240
SELJE LOCAL COUNCIL	Norway	ILE EN MER ISLAND	450
CARIBBEAN CRUISE LINERS	U.S.A.	SHIP UNDER CONSTRUCTION	100
LOCAL COUNCIL OF LOFOTEN	Norway	MICROFILTRATION	1000
LOCAL COUNCIL WEESTERN	Norway	MICROFILTRATION EXTENDABLE	450 to 1000
LOCAL COUNCIL EIDE	Norway	ON SHORE ULTRAFILTRATION	3000
ASSOCIATION « EAU ET MER »	France Marseilles	ON SHORE PLANIER ISLAND	10
LOCAL COUNCIL EIDE	Norway	ON SHORE ULTRAFILTRATION	3000
OILAR ESTABLISHMENT	Tunisie	SHIP M/T OCEAN	14

OILAR ESTABLISHMENT	Tunisie	SHIP M/T OCEAN	7
OILAR ESTABLISHMENT	Tunisie	SHIP M/T OCEAN II	7
MUNICIPALITY OF ERSA	France Corsica	ON SHORE	60
MUNICIPALITY OF HYERES	France	PORT CROS ISLAND	100
FRENCH ATOMIC RESEARCH INSTITUTE (CEA Cadarache)	France Cadarache	IN SITE	1000
LIQUEURS COINTREAU	France Angers	IN SITE	1000

# CONCORD WATER SUPPLIES LTD

## TESTIMONIALS

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May 22, 2001

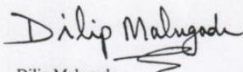
### Testimonial

I, the undersigned, Dilip Malugade, National Sales Manager of Ametek/Plymouth Products, confirm that during the past 13 years I have very much appreciated the close collaboration between Mr. Olsen and myself related to various Sea Water and brackish water desalination projects.

Under Mr. Olsen's management of Hydrotec France S.A., one of the major projects we have applied for was a RO SW Desalination Plant for the Municipality of Algeciras Spain with a capacity of 20,000 m3/day. I appreciated Mr. Olsen's efficiency during the negotiations with the local Spanish authorities.

Mr. Olsen's ability as a skilled technician was highly evaluated when he was responsible for the construction and testing of the patented Conil industrial wastewater filter. This procedure was based on the principle of depression filtration with automatic cleaning of the filter cloth. The testing of the prototype at the French Atomic Institute (CEA - Cadarache) gave excellent results.

I conclude with my best recommendations to anybody who would use his services.



Dilip Malugade  
National Sales Manager  
Industrial & Commercial Filtration  
Ametek/Plymouth Products

**HOLLUNG GROUP A.S.**  
Etablet 1963

### Testimonial

Mr. Thor Bjørnfeldt Andersen, President of the Hollung Group, Fredrikstad Norway is very pleased to confirm that our group had great pleasure during the past years to work together with Mr. Kolbjørn Olsen regarding projects on desalination plants both from sea water and from brackish water (RO) in Senegal, on the Philippines and presently in China.

We recognize Mr. Olsen to be very competent in his field, and in our opinion his technical and professional level is to be considered as highly international.

From our experience we recognize that Mr. Olsen has very excellent design knowledge, engineering, calculation and construction of water filtering plants – both low and high Pressure – applicable on brackish- and seawater. According our knowledge Mr. Olsen solves also the local problems, which might arise for specific adapted raw water feed drilled wells or from open sea intake, plant installation and plant commissioning.

He is practising several languages, with French and English fluidly, both oral and written. We have joined together during several meetings with discussions and negotiations in his presence with foreign clients and our own contact key persons. During these meetings, Mr. Olsen showed good strategy and turned out to be a clever negotiator.

Our Group wishes definitely to continue our collaboration with Mr. Olsen also in the future, and we therefore give him our best recommendations.

Fredrikstad, 28<sup>th</sup> May 2001-05-28

Thor Bjørnfeldt Andersen

*Thor B. Andersen*

President

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