



Capability Statement

“Our goal is to satisfy your environmental and financial expectations by the design of proven 'state-of-the-art' treatment plants for challenging industrial effluents.”

Benefit from Emil's vast experience in membrane applications.

Learn more at www.esmil.co.uk

Corrib Field Development
Bellanaboy Bridge Gas Terminal Shell E&P



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1. EXECUTIVE SUMMARY

Esmil Process Systems was formed in 1975 and has over 45 years' experience in the field of water and effluent treatment and re-cycling. We are a specialist solutions provider in the field of effluent treatment and water re-cycling, offering BAT (Best Available Technology) using state of the art membrane separation processes.

In fact, our innovative approach to effluent treatment and re-cycling resulted in Esmil winning the prestigious “**Queens Award for Environmental Achievement**” in 1999 for the Esmil Zero Discharge Process.

After the Queens Award, we also gained the “**DTI Best Supplier**” award for 2000. Since these important milestones, our Company has continued to achieve technical excellence in the field of effluent treatment and re-cycling, leading to one of our largest projects thus far, the prestigious Gas Terminal Corrib project for Shell.

Our experience covers all type of water and waste water treatments including Membrane technology covers the following:

- Ultrafiltration
- Nanofiltration
- Reverse osmosis
- Membrane bioreactors
- VSEP (vibratory shear enhances process)

The following companies have benefited from Esmil's experience and expertise:

- Shell E&P Ireland Ltd
- Shell UK
- BP Petroleum
- British Gas
- Kronospan
- Coca-Cola Schweppes UK
- Hartridges Soft Drinks UK
- Unilin S.A.S – Boards Division France
- APDK Apsheronk Russia
- Essity UK
- ONGC India



2. THE ESMIL APPROACH

The Testing Laboratory

We have the technology and the expertise to prove to you, that our fully equipped testing laboratory houses are the very latest membrane testing rigs. This ensures that the correct membrane is selected and initial determination of flux rates and permeate recovery are suitable for your needs.

The Pilot Plant

We believe there is no substitute for experience and expertise and by setting up one of our Pilot Test Rigs on site, which are fully scalable, we can guarantee good operational performance, accurate assessment of chemical consumption and low running costs. We also have a fully ATEX certified pilot plant for use in explosive environments.



The Design Team

All our design engineers have many years of experience in the field of membrane separation/technology and this in turn provides our clients with confidence in knowing that the right membrane technology and chemistry is applied to their individual project.

Although we do not manufacture the membranes and operate completely independently from the membrane suppliers, we foster solid relationships with our suppliers to ensure that the right membrane is selected within the right design envelope.

The Project Team

We work in some of the most demanding industry sectors globally and believe in building close relationships with our clients and because of this our Project Team has a demonstrable track record of delivering projects on time and budget.



The Commissioning Team

A shiny new plant is no good if it does not work! Our commissioning engineers have years of hard won experience in commissioning membrane systems to ensure optimum performance and years of trouble-free operation.

3. PRODUCTS AND SERVICES

We can provide solutions for a wide range of **Water**, **Waste Water** and **Product Recovery** problems. Whether utilizing conventional technologies, or more modern membrane processes, we offer a complete solution package tailored to your specific needs.

Our services range from small scale evaluations, through to lease purchase with operational and maintenance contracts. We can also offer full process design, construction and commissioning. Our aim is to minimise your financial risk and maximize your return through product recovery and/or waste reduction.

Our Services

The services we can offer include:

- Small scale pilot plant evaluation
This can be carried out either in-house or at your site. We assess treatment effectiveness, product recovery, plant size and other specific requirements.
- Selection of optimal membrane systems.
- Capital plant and process operational cost projection.
- Integrated plant design, using both conventional processes and Membrane Technology.
- Build, Installation and Commissioning.
- Operator training and process optimization.
- Long term, comprehensive service support, including maintenance and system upgrades.
- Lease purchase with full operational and maintenance contracts.

The Benefits

The commercial benefits are

- CapEx – Competitive capital installation costs
- OpEx – Designs consider operating life costs
- Footprint – Variable solutions to match the available site area
- Efficiency – Improved liquid effluent treatment capability
- Control – More effective management of waste products
- Environment – Less waste and reduced pollution risk



- Energy – Carbon footprint savings
- Profile – Improved green credentials and brand image
- Service – Operate and maintenance package
- Finance – Operating lease and funded provision of service options

Our goal is to satisfy your environmental and financial expectations by the design of a proven 'state-of-the-art' treatment plants for challenging industrial effluents.

ESMIL Design Philosophy

We will use the most appropriate solution to suit your treatment requirements. Our general approach to wastewater treatment will combine conventional physical-chemical treatment processes supplemented, where necessary, with advanced proven Membrane Technology. For example, for oily water treatment applications, conventional gravity separators and/or flotation techniques are typically supplemented by specialised Membrane Technology which, can result in even potable quality water being produced.

Membrane treatment processes effectively separate solids from effluent streams and as no two wastewater streams are the same, our extensive experience allows us to develop systems that can benefit our clients in the following ways.

- Low capital cost.
- Flexible operation.
- Reliable and easy to operate.
- Modular and easy to upgrade.

We use proven technologies for optimal treatment effectiveness and reliability. In the process of developing new solutions to reduce the cost of effluent disposal and environmental compliance, we have established valued relationships with leading industrial organisations, one of these being the largest supplier of specialty membranes – Suez formerly GE Water Osmonics and Process Technologies.

We are continually looking towards new technological developments, for example our association with New Logic International (USA) with their revolutionary vibratory shear enhanced processing (VSEP) fouling-resistant membrane system.

And as a part of EKOTON Industrial Group, we can be sure to provide the most reliable conventional equipment for our projects with 24/7 service available.



4. THE COMPANY

Name of Company

Esmil Process Systems Ltd

Address of Registered Business and Principal Place of Business:

The Loft, 30 Abbey Barn Road
HIGH WYCOMBE
Buckinghamshire
England
HP11 1RW

Telephone: +44(0)-1494 526155

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E-mail: info@esmil.co.uk

Website: www.esmil.co.uk

VAT Registration Number	813 0392 62
Registration Number under the Companies Act 1985	04096461
Date of Registration	October 1985
CIS5 Unique tax number	4182927841101

Management Structure

The company is managed by the directors, assisted by directly employed professional staff.

Staff and Labour Force

By directly employing key staff, Esmil Process Systems Ltd, has immediate access to all the skills necessary to provide comprehensive services described above. These services include professional engineers, environmentalists, skilled tradesmen and site operatives.



5. FINANCIAL INFORMATION

As a company, we are financially stable and have consistently returned profits throughout most of our trading history.

6. HEALTH, SAFETY AND WELFARE

Health and Safety underpins all of Emil's activities. The safety of our workforce and other members of the public are paramount. We continually strive to improve safety awareness through a policy of training development.

7. HEALTH AND SAFETY PERFORMANCE

Last five years data

- Fatal accidents: 0
- Major injuries: 0
- Over three day accidents: 0
- Dangerous occurrences: 0

Neither Esmil nor individuals employed by the company have been prosecuted for any breaches of health and safety legislation. No prohibition, improvement or other enforcement notices have been issued against Esmil ever.

8. QUALITY ASSURANCE

Esmil Process Systems Ltd operates a quality assurance system based on ISO9001

9. ENVIRONMENTAL POLICY

Esmil Process Systems Ltd operates its' own environmental policy based on ISO14000

10. SELECTED PROJECTS

Client	Site	Installation	Flow	Complete
Panel Plus Ltd	Thailand	MDF Waste Water Treatment	25 m ³ /hr	Completed 2018
JG Pears	UK	Waste Water Treatment	35 m ³ /hr	Completed 2018
Emvertec Ltd	UK	Condensate Purification	3 m ³ /hr	Completed 2018
Apsheronsk	Russia	MDF Waste Water Treatment	25 m ³ /hr	December 2015
ISP Micro Caps	Poole Dorset	Installed VSEP System P50	N/A	January 2015
Baker Hughes	UK	Organic Waste Water Treatment	25 m ³ /hr	February 2015
Shell Oil	Corrib Ireland	Produced Water Treatment Surface Water Treatment & Sludge Treatment	Produced Water 10m ³ /hr Surface Water 30m ³ /hr	Supply – December 2010 Commissioning - March 2016
Global Advantech	Plymouth	RO Unit Wood gasification	Up to 5 m ³ /hr	December 2012
Global Advantech	Papua New Guinea	RO Plant treatment of drill water	Up to 5 m ³ /hr	January 2012
ONGC India	Offshore Platform, Indian Ocean	Refurbish Oil/Water Separation Plant	275m ³ /hr. including 25m ³ /hr Froth recycle flow rate	April 2009
Unilin France	Sedan France	2 nd MDF Effluent	30m ³ /hr	February 2006
Finsa Spain	Padron Spain	MDF Effluent Pre-treatment plant	75m ³ /hr	January 2002
Interpanel Spain	Zamora Spain	MDF Effluent Membrane plant	12m ³ /hr	December 2003
MDF Hallein, Austria	Hallein Austria	MDF Effluent	36m ³ /hr	December 2002

Company Profile prepared by Esmil Process Systems Ltd



11. REFERENCES

To be respectful to our valued clients, we would appreciate notification, if the intention is to contact any of our reference sites, to enable us to advise them in advance. Thank you for your understanding in this matter.

Client Name	Shell E&P Ireland Ltd.
Address	Corrib Ireland WWTP, Corrib, County Mayo Ireland
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Client Name	ONGC India – HAL Offshore Ltd
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Client Name	Unilin S.A.S. – Boards Division
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