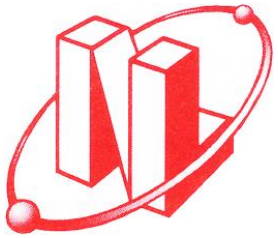
NL Chemical Technology Inc. Overview

Company Overview

About Us



NLCT is a leading membrane technology company specialized in research and development of advanced polymeric reverse osmosis (RO) and nanofiltration (NF) membranes for wide range of water treatment applications.

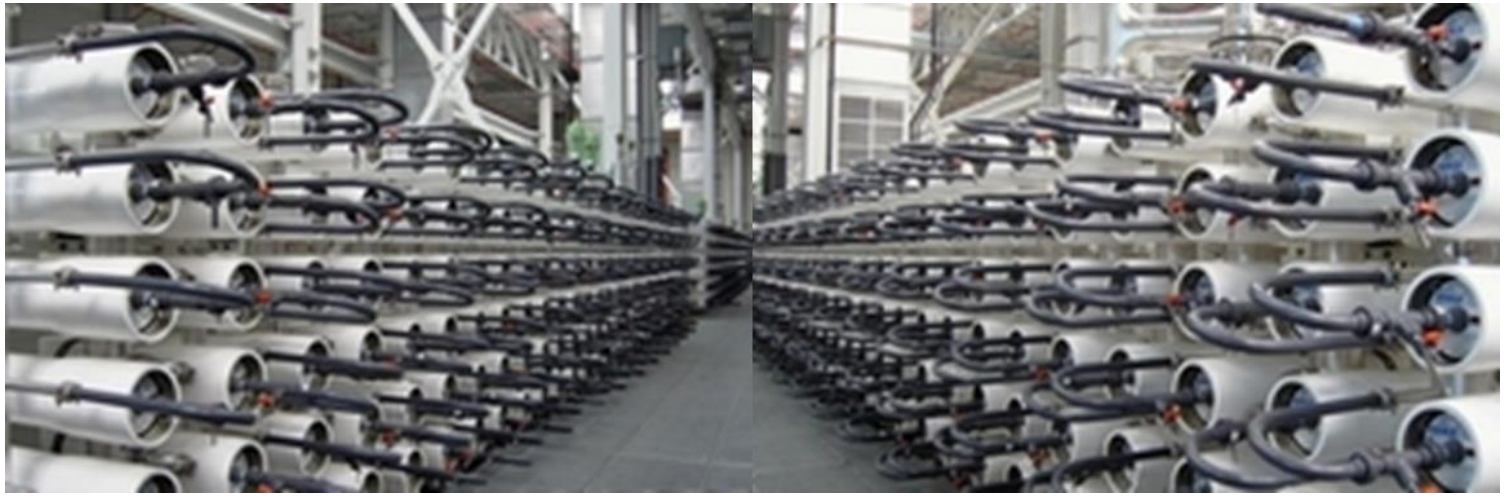
Located near Chicago USA, it has pilot facility with continuous membrane casting and coating capability for not only the studies of membrane formulation, but also the design of equipment and development of optimal process for commercial scale production.

Over the past 30 years, NLCT has demonstrated a proven track record of providing its customers with state-of-the-art solutions for water treatment and seawater desalination. The advanced membranes produced from our proprietary technology have consistently demonstrated outstanding performances that meet or exceed industry standards.

Company Highlights

- ✓ **Versatile portfolio** of water treatment membranes to address the most demanding applications
- ✓ **Unique business model** which allows for technology licensing and turn-key operation
- ✓ Technology has been **validated in high volume manufacturing**
- ✓ **Elite core team** consists of world-renowned scientists and experienced professionals
- ✓ Long track record of **sustained profitability and stability**
- ✓ **Culture of excellence** using advanced Six Sigma methodology
- ✓ **US Based company** founded in 1995 and wholly owned by founders

Business Model



- **Technology licensing** of NL’s propriety membrane technology specially designed for large scale production
- **Turn-key operation** through collaboration with our equipment suppliers
- **Custom-made production line** to match our chemistry and process know-how

Management Team

Dr. Norman N. Li, Founder and President

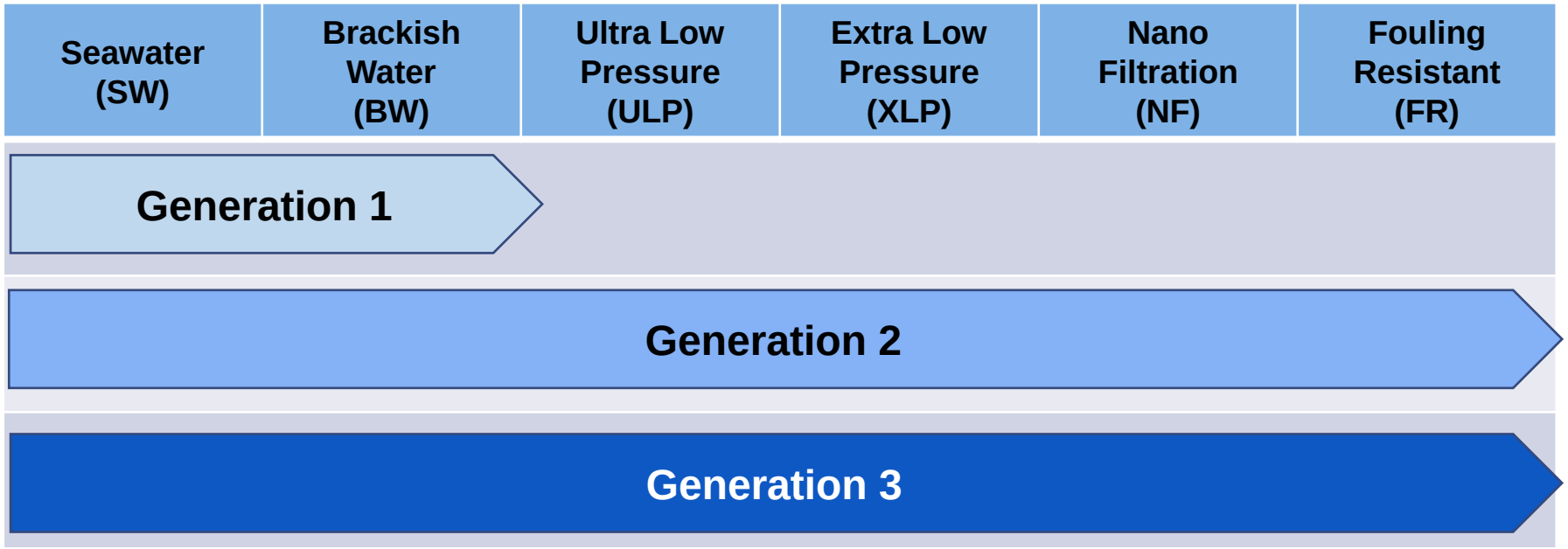
A world-famous scientist and chemical engineer, a founder of membrane science and technology, the authority of world separation science and technology, a technical adviser of American Apollo Moon Landing Program, academician of 3 academies - US National Academy of Engineering, Chinese Academy of Sciences, and Academia Sinica. Awardee of Perkin Medal (the highest honor in American chemical industry); the Alan Michaels Award (the highest honor given by the North American Membrane Society) and International Science and Technology Cooperation Award (the highest honor given to foreign scientists by Chinese Government).

Dr. Jane C. Li, Vice President

BS in Chemistry and Ph.D. in Applied Statistics. Master Black Belt of Six Sigma, former Data Science leader in Exxon Chemical and Director of Statistics and Six Sigma at UOP (Honeywell). With 40+ years R&D and manufacturing experience in the US chemical and petroleum industries.

Technology Overview

Overview



Our newest generation of membranes represents almost **30 years of focused research and development** and has resulted in a portfolio of RO/NF membranes that **covers every major application** and **meets / exceeds industry standards**

Products and Applications

NLCT proprietary TFC membrane type							
	SW	Seawater membrane				NF-1	
	BW	Brackish water membrane				High rejection nanofiltration	
	ULP	Ultra-low pressure membrane				NF-2	
	XLP	Extra-low pressure membrane				High flux nanofiltration membrane	
	FR	Fouling resistant membrane					

Applications	SW	BW	ULP	XLP	FR	NF-1	NF-2
Seawater desalination	√						
Marine	√						
Brackish water treatment		√	√	√	√		
Water softening						√	√
Drinking water process		√	√	√	√	√	√
Waste water reclamation		√			√	√	
Municipal water treatment	√	√			√	√	√
Industrial/process water		√	√	√	√		
Semiconductor rinse water		√	√	√	√		
Pesticide/organics removal						√	√
Water for pharmaceutical		√	√	√			
Antibiotics production						√	√
Food/wine/beverage		√				√	√

NLCT's New SW Membranes

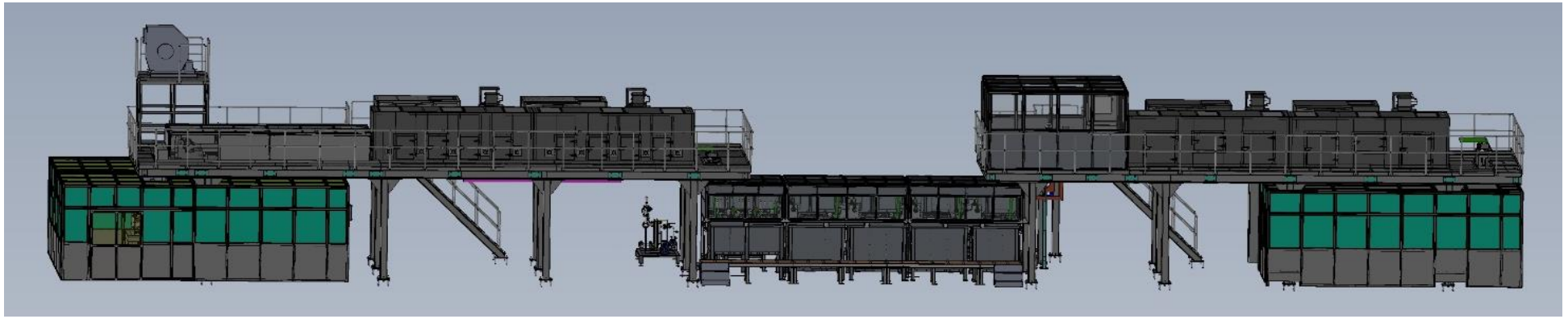
We have successfully developed a technology platform to customize and produce high-performance seawater (SW) RO membranes, including energy-saving high-permeable options as well as robust high-rejection versions, to meet the diverse needs of our customers.

The newest high-rejection SWRO membrane boasts a remarkable salt rejection rate of over 99.85% for demanding applications, on par with the best products on the market.

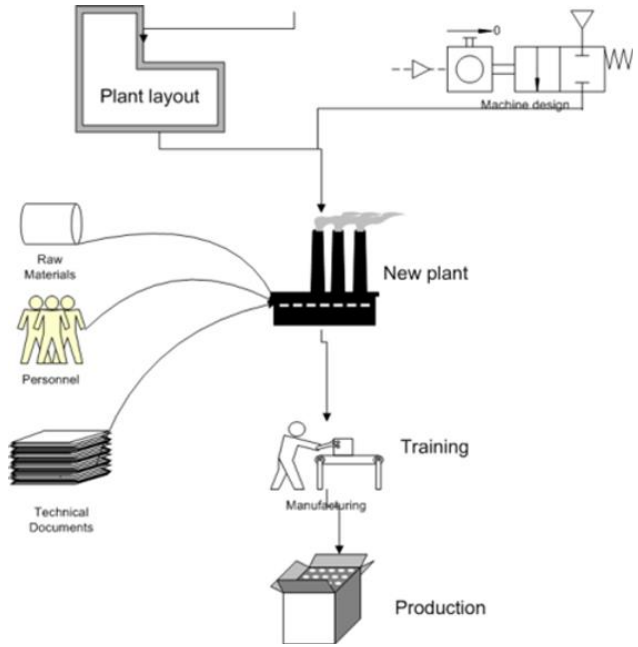
Production Line Overview

Casting Line

Coating Line



Technology Licensing and Turnkey Delivery



Pilot-scale studies

Technology transfer

Scaling-up & Commissioning

Key Milestones

In the Latest Project Implementation

NLCT has recently licensed its technology to a top Fortune 500 corporation and helped the customer build a modern membrane manufacturing plant. The project is currently in its final stages and has already achieved several major milestones.

- The capacity of the membrane plant has been successfully demonstrated in continuous operation.
- The produced RO/NF membrane showed rising competitiveness comparing to the top brands in the marketplace.
- The new gen BW membrane elements have been used in multiple wastewater treatment plants for reuse of wastewater from petrochemical production and oil refinery and consistently delivered strong performances.
- The newly developed NF membrane made a remarkable debut and successfully implemented in a large-scale municipal landfill leachate treatment facility. The quality of the produced water has been approved by national authoritative department, cementing its position as a top-tier option for customers seeking the very best.