ZenithPura

苏州新鼎汇环保科技有限公司

SUZHOU XINDINGHUI ENVIRONMENTAL PROTECTION TECHNOLOGY CO., LTD.

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VONTRON

Essential is water to life
Vontron presents inexhaustible supply



VISION

Upgrade our value upon the top quality and strive to become the professional leader in the world

MISSION

Broaden the new sources of supply and reduce the consumption so as to bloom the water industry

VALUE

Advocate the science and keep in pursuit for excellence

PRESIDENT'S ADDRESS

Evolved from “Vontron Enviro-Tech” via “Vontron Membrane Technology”, Vontron Technology Co., Ltd. has grown up through the past years. By virtue of innovation and advancement, we have survived the intensively competing market where only the fittest and the excellent can survive. We are contained in this ecological system, and in return make contributions to this system. We’ve successfully merged the individual value in the corporate vale, and merged the corporate value in the social value. We are wholeheartedly grateful to our valuable customers for their unswerving support in the past years.

We will be, as always, making relentless efforts to contribute our value to the society in the coming era. We are always following the corporate philosophy of “surpassing ourselves and Keeping in endless pursuit”, and are making our best efforts to demonstrate the spirits of tenacity, wisdom and innovation.

We are always treating the world with a thanksgiving heart since we are bestowed with the blooming life.

蔡志奇

COMPANY PROFILE

Vontron Technology Co., Ltd. is specialized in R&D, manufacture and technical service of RO and NF membrane elements. Owning the core technology and capability for fabrication of membrane sheet, Vontron is the biggest professional manufacturer of compound RO membranes in China, and is the provider of system design and applied service with powerful technical support. Vontron owns and operates its producing lines in Guiyang, amounting to a total yearly capacity of 17 million square meters of RO/NF membrane sheets,and will be expanded to 30 million square meters in 2017.

Vontron Technology Co., Ltd. will be, as always, carrying out the corporate spirit of “Surmounting Ourselves and Keeping in Endless Pursuit”, and will devote itself to becoming one of the worldwide top suppliers in the membrane industry with large scale, top quality, highest level technology, complete product directory and best service.

COMPANY MEMORABILIA

December 2000

December 2000: Vontron Enviro-Tech Co., Ltd. was established and duly registered

July 2001

The Company imported from the United States a complete set of equipment and technology for composite RO membrane production.

February 22, 2002

The producing technology and equipment for RO membranes imported from abroad passed the Appraisal of New Technical Achievements organized by the Science & Technology Department of Guizhou Province.

The year of 2003

VONTRON’s membrane products entered the market.

November 25, 2003

the company was certified to ISO9001:2000 Quality Control System of China Quality Certification Center.

From November 9 to November 11, 2006

Vontron succeeded in organizing the “All-China RO Membrane Domesticization Forum 2005” held in Guiyang, China.

January 10, 2006

VONTRON's residential RO membranes were Cerified to NSF/ANSI 58.

2000 2001 2002 2003 2004 2005 2006 2007 2008 2010 2011 2012 2014 2015

July 2007

Vontron Technology Co., Ltd. was established and registered in Beijing.

November 2011

Vontron’s membrane products were certified to WQA Gold Seal

January 2015

Vontron is Certified to NSF-61



CERTIFICATION

Vontron was certified to ISO9001 in November 2011

Vontron was certified to NSF-58 in January 2006 and Certified to NSF-61 in January 2015

Vontron passed the sanitation inspection held by Center of Disease Control of China in June 2006

Vontron was certified to WQA Gold Seal in November 2011

GOVERNMENTAL APPROVAL

Vontron obtained the Health Approval issued by the Department of Health of Beijing in May 2010

Vontron obtained the Health Approval issued by the Department of Health of Guizhou Province in August 2012


北京市生活饮用水
供水设备及用品卫生许可批件



PRODUCTS

Catalog of Residential RO Elements

Type	Model	Stable Rejection(%)	Average Permeate GPD (m^3/d)	Testing Conditions		
				Testing Pressure psi (MPa)	Testing Solution Concentration NaCl(ppm)	Recovery (%)
Regular Residential Elements	ULP2008-50P	97	50 (0.19)	60 (0.41)	250	15
	ULP1609-50P	97	50 (0.19)			
	ULP1609-50F	97	50 (0.19)			
	ULP1809-50Q	97	50 (0.19)			
	ULP1809-50P	97	50 (0.19)			
	ULP1809-100Q	94	100 (0.38)			
	ULP2309-100P	97	100 (0.38)			30
	ULP2809-200	95	200 (0.76)			25
	ULP1810-50	97	50 (0.19)			15
	ULP1810-50Q	97	50 (0.19)			
	ULP1810-50P	97	50 (0.19)			
	ULP1810-70	91	70 (0.27)			
	ULP2010-80	94	80 (0.3)			
	ULP2010-100Q	93	100 (0.38)			
	ULP1812-50	97.5	50 (0.19)			
	XLP2012-50	96.5	50 (0.19)	30 (0.21)	250	15
	HOR2012-50	97	50 (0.19)	60 (0.41)	250	15
	ULP1812-75	97.5	75 (0.28)			
	ULP2012-100	94	100 (0.38)			
	ULP2012-125	94	125 (0.48)			
	ULP2812-200	97	200 (0.76)	100 (0.69)	500	15
	ULP3012-240	97	240 (0.91)			
	ULP3012-400	95	400 (1.52)			
	ULP3013-400	95	400 (1.52)			
	ULP3020-420	97	420 (1.6)	100 (0.69)	500	40

Product Catalog

Catalog of Industrial RO Membrane Elements

Type	Model	Stable Rejection(%)	Average Permeate GPD (m^3/d)	Testing Conditions		
				Testing Pressure psi (MPa)	Testing Solution Concentration NaCl (ppm)	Recovery (%)
Low Pressure Series	LP21-8040	99.5	9600 (36.3)	225 (1.55)	2000	15
	LP22-8040	99.5	10500 (39.7)			
	LP21-4040	99.5	2400 (9.1)			
Extremely Low Pressure Series	XLP11-4040	98.0	2000 (7.6)	100 (0.69)	500	15
Ultra-low Pressure Series	ULP21-8040	99.0	11000 (41.6)	150 (1.03)	1500	15
	ULP12-8040	98.0	13200 (49.9)			
	ULP22-8040	99.0	12100 (45.7)			
	ULP32-8040	99.5	10500 (39.7)			
	ULP11-4040	98.0	2700 (10.2)			
	ULP21-4040	99.0	2400 (9.1)			
	ULP31-4040	99.4	1900 (7.2)			
	ULP11-4021	98.0	1000 (3.78)	150 (1.03)	1500	8
	ULP21-4021	99.0	950 (3.6)			
	ULP31-4021	99.4	850 (3.2)			
	ULP21-2521	99.0	300 (1.13)			
	ULP21-2540	99.0	750 (2.84)			15
Seawater Desalination Series	SW8040XHR-400	99.85	6000 (22.7)	800 (5.5)	32800	8
	SW8040HR-400	99.8	7500 (28.4)			
	SW8040LE-400	99.8	9000 (34.1)			
	SW8040XLE-400	99.7	11000 (41.6)			
	SW4040HR	99.8	1600 (6.1)			
	SW4040LE	99.7	1900 (7.2)			
	SW2540	99.5	600 (2.3)			
	SW4021	99.5	750 (2.8)			4
	SW2521	99.5	270 (1.0)			
Fouling Resistant Series	FR11-8040	99.5	9600 (36.3)	225 (1.55)	2000	15
	FR12-8040	99.5	10500 (39.7)			
	FR11-4040	99.5	2200 (8.3)			
High Oxidation Resistant Series	HOR22-8040	99.5	9000 (34.1)	225 (1.55)	2000	15
	HOR21-4040	99.5	2200 (8.3)			

Catalog of Nanofiltration Membranes

Type	Model	Stable Rejection(%)	Average Permeate GPD (m^3/d)	Testing Conditions		
				Testing Pressure psi (MPa)	Testing Solution Concentration	Recovery (%)
Residential NF Elements	VNF-1812	30±10	100 (0.38)	60 (0.41)	250 ppm (NaCl)	15%
		≥ 85			250 ppm ($CaCl_2$)	15%
	VNF-2012	30±10	120 (0.45)	60 (0.41)	250 ppm (NaCl)	15%
		≥ 85			250 ppm ($CaCl_2$)	15%
	VNF-2812	30±10	300 (1.14)	60 (0.41)	250 ppm (NaCl)	15%
		≥ 85			250 ppm ($CaCl_2$)	15%
Industrial NF Elements	VNF1-8040	30 ~ 50	12000 (45.5)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	10000 (37.9)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF2-8040	90 ~ 98	10000 (37.9)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	10000 (37.9)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF-8040K	> 98	10000 (37.9)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF1-4040	30 ~ 50	2400 (9.1)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	2000 (7.5)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF2-4040	90 ~ 98	2000 (7.5)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	2000 (7.5)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF1-2540	30 ~ 50	800 (3.03)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	650 (2.46)	100 (0.69)	2000ppm ($MgSO_4$)	15%
	VNF2-2540	90 ~ 98	700 (2.65)	100 (0.69)	2000ppm (NaCl)	15%
		> 96	700 (2.65)	100 (0.69)	2000ppm ($MgSO_4$)	15%



Variety of Membrane Products



General-purpose Industrial Membranes

Low Pressure Element – LP Series

Suitable for desalting surface water, underground water, tap water and municipal water, etc. with salinity under 10000ppm.

Ultra Low Pressure Element – ULP Series

Suitable for desalting those water sources with salt concentration lower than 2000 ppm, such as surface water, underground water, tap water and municipal water, etc

Extra Low Pressure Element – XLP Series

Suitable for desalting those water sources with low salinity while not requiring high salt rejection, with salt concentration lower than 1000 ppm



Seawater Desalination Membranes

Seawater Desalination Element – SW Series

Applicable to treatment of seawater and high-concentration brackish water



Fouling Resistant Membranes

Fouling Resistant Element – FR Series

The FR series is suitable for wastewater reclamation application and treatment of high-polluted water sources thanks to its strengthened anti-scaling performance and higher resistance to organic and microbial fouling which can decrease the fouling speed and extend the service life of membrane element.



High Oxidation Resistant Membranes

HOR Series

The HOR series has the excellent properties that can remain basically unchanged through continuous impact of 1880ppm oxidative matters for 30 hours. It can endure a transient oxidative impact of NaClO at 26000ppm•h while the rejection rate remains above 98%.



Residential RO Element

Residential Membrane Element

The residential RO membrane element are mainly applicable to various small-sized systems, such as household water purifier and other water purifying devices in hospital and laboratory.



Nanofiltration Membranes

Nanofiltration membranes are designed for removing from water various organics, microbes, viruses and most metallic ions with two or higher valence while retaining part of the sodium, potassium, calcium and magnesium ions, etc.

Residential NF Element

The residential NF membrane element are applicable to various small-sized drinking systems, such as home drinking water purifiers, mineralized drinking fountain, etc.

Industrial NF Element

The industrial NF membranes are used in:

• Treatment of drinking water

• Separation and concentration/purification process for foodstuff, medicine, biological engineering and pollution treatment, etc.

Application Fields



Power Industry



Chemical Industry



Metallurgical Industry



Foodstuff and Beverage



Pharmaceutical Industry



Electronic Industry



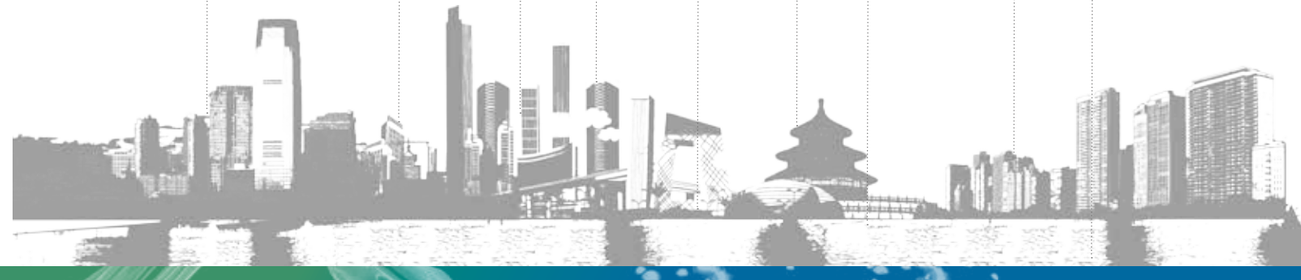
Water Treatment



Seawater Desalination



Drinking Water



Low Pressure Element – LP Series

Production Introduction

The LP (low pressure) series of aromatic polyamide compound membrane element developed by Vontron Technology Co., Ltd. has the properties of low-pressure operation, high permeate flow and excellent desalination and are applicable to desalination of brackish water. Besides, it is particularly applicable to fabrication of high-purity water for electronic industry and electric power industry owing to its excellent performance in removing soluble salts, TOC, SiO_2, etc.

Being suitable for desalting such water sources as surface water, underground water, tap water and municipal water, etc., LP series is mainly applicable to treatment of various industrial water such as industrial-purpose pure water, boiler water replenishment in power plant, and can be also applied to such brackish water applications as treatment of high-concentrated saline wastewater and production of beverage-purpose water.

Specifications and Major Properties

Model	Active Membrane Area $ft^2(m^2)$	Average Permeated Flow GPD(m^3/d)	Stable Rejection Rate (%)	Minimum Rejection Rate (%)
LP21-8040	365(33.9)	9600(36.3)	99.5	99.3
LP22-8040	400(37.0)	10500(39.7)	99.5	99.3
LP21-4040	90(8.4)	2400(9.1)	99.5	99.3

Testing Conditions

Testing Pressure……225psi (1.55Mpa)
Testing Solution Temperature……25℃
Testing Solution Concentration (NaCl)……2000ppm
pH Value of Testing Solution ……7.5
Single Element Recovery……15%

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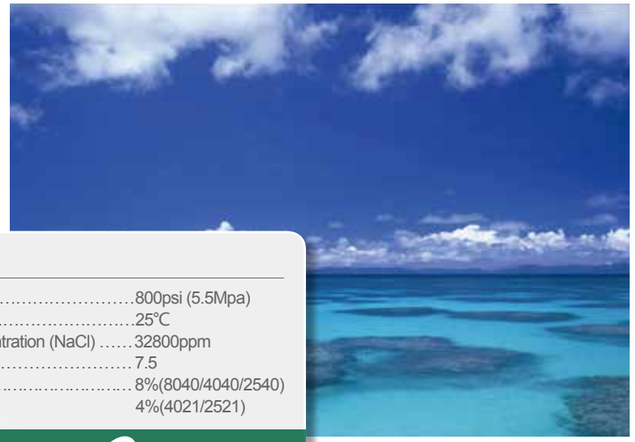
Seawater Desalination Element – SW Series



Testing Conditions

Testing Pressure……800psi (5.5Mpa)
Testing Solution Temperature……25℃
(NaCl) Testing Solution Concentration (NaCl) ……32800ppm
pH Value of Testing Solution……7.5
Single Element Recovery……8%(8040/4040/2540)
4%(4021/2521)

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Product Introduction

SW series of aromatic polyamide compound membrane element developed by Vontron Technology Co., Ltd. is applicable to desalination of seawater. By optimizing the structure of membrane element, the SW series increases the permeate flow, and requires fewer elements for same permeate flow. It is characterized by low operating pressure, low investment in equipment, excellent rejection rate and reliable performance, and its high salt rejection can ensure producing the drinking water from seawater simply through one-pass RO design. Applicable to treatment of seawater and high-concentration brackish water, the SW series of membrane element is designed for various industrial water treatment, such as seawater desalination, high-concentration brackish water desalting, boiler water replenishment for power plant, etc., and is also applicable to various fields such as recycling of wastewater, concentration and reclamation of such substances with high additional value as foodstuff, pharmaceuticals, etc.

Model	Active Membrane Area $ft^2(m^2)$	Average Permeated Flow GPD(m^3/d)	Stable Rejection Rate (%)	Minimum Rejection Rate (%)
SW8040XHR-400	400 (37.2)	6000 (22.7)	99.85	99.75
SW8040HR-400	400 (37.2)	7500 (28.4)	99.8	99.7
SW8040LE-400	400 (37.2)	9000 (34.1)	99.8	99.7
SW8040XLE-400	400 (37.2)	11000 (41.6)	99.7	99.6
SW4040HR	85 (7.9)	1600 (6.1)	99.8	99.7
SW4040LE	85 (7.9)	1900 (7.2)	99.7	99.6
SW4021	33 (3.1)	750 (2.8)	99.5	99.3
SW2521	12 (1.1)	270 (1.0)	99.5	99.3
SW2540	28 (2.6)	600 (2.3)	99.5	99.3

Fouling Resistant Element – FR Series



Testing Conditions

Testing Pressure	225psi (1.55Mpa)
Testing Solution Temperature	25℃
(NaCl) Testing Solution Concentration (NaCl)	2000ppm
pH Value of Testing Solution	7.5
Single Element Recovery	15%

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Production Introduction

Vontron's fouling resistant elements include FR series and PURO series.

FR (fouling resistant) series of aromatic polyamide RO membrane element developed by Vontron Technology Co., Ltd. is applicable to desalination of brackish water. It is characterized by low-pressure operation, higher water productivity and excellent desalting performance. Moreover, special treatment has been made to the surface of membrane with unique technology to change its electrical charge and smoothness, increasing the hydrophilicity of membrane surface, thus decreasing the adhesion of contamination and microbe so as to lessen the pollution and extend the service life of elements.

Newly developed by Vontron, the PURO-I is specially designed for treatment of water reclamation and surface water treatment where the water source contains high contamination. This brand-new element contains a new fouling resistant coating, and the membrane surface is treated with special technology to modify the electrical charge and smoothness of membrane surface so as to increasing the hydrophilicity of membrane surface, thus decreasing the adhesion of contamination and microbe so as to lessen the pollution and extend the service life of elements. Besides, the wider 34mil feed spacer channel can provide better fouling resistance and washability.

Vontron's fouling resistant products are designed for desalting treatment of such water with salt concentration less than 10,000 ppm as surface water, underground water, tap water and municipal water, etc. It is mainly applied to treatment of various industrial water applications, such as reuse of industrial reclaimed water and boiler water replenishment for power plant, etc., and is particularly applicable to treatment of those water containing slight organic pollutants such as industrial wastewater, municipal sewage and other slightly contaminated water.

Specifications and Major Properties

Model	Active Membrane Area $ft^2(m^2)$	Average Permeated Flow GPD(m^3/d)	Stable Rejection Rate (%)	Minimum Rejection Rate (%)
FR11-8040	365 (33.9)	9600 (36.3)	99.5	99.3
FR12-8040	400 (37.2)	10500 (39.7)	99.5	99.3
FR11-4040	90 (8.4)	2200 (8.3)	99.5	99.3

High Oxidation Resistant Element - HOR Series

Production Introduction

HOR (high oxidation resistant) series of aromatic polyamide compound membrane element newly developed by Vontron Technology Co., Ltd. has the properties of low operating pressure, high permeate flow and excellent rejection performance, etc. Besides, the use of special synthesizing process enhances the oxidation property of membrane element and enables the membrane element to endure the impact by certain magnitude of oxidative substance, thus simplifying and optimizing the pretreatment process of RO system, decreasing the microbial contamination of membrane element, saving the operating cost and elongating the service life.

Industrial HOR series is designed for the desalting treatment of those water sources with salinity lower than 10000ppm such as surface water, underground water, tap water and municipal water, etc., and is especially applicable to reuse treatment of those water sources that contain microbial contamination or oxidative substance, such as municipal-purpose or industrial-purpose reclaimed water, electroplating wastewater, etc. The residential HOR-2012 element is mainly applied to various miniature systems such as household water purifier, water purifying devices for hospital and laboratory, etc.

Specifications and Major Properties

Model	Active Membrane Area $ft^2(m^2)$	Average Permeated Flow GPD(m^3/d)	Stable Rejection Rate (%)	Minimum Rejection Rate (%)
HOR22-8040	400 (37.2)	9000 (34.1)	99.5	99.2
HOR21-4040	90 (8.4)	2200 (8.3)	99.5	99.2



Testing Conditions

Testing Pressure	225psi (1.55Mpa) (8040/4040)
Testing Solution Temperature	25℃
(NaCl) Testing Solution Concentration (NaCl)	2000ppm (8040/4040)
pH Value of Testing Solution	7.5
Single Element Recovery	15%

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Nanofiltration Membranes – Residential Element

Production Introduction

Applicable to various small-sized drinking systems, such as home drinking water purifiers, mineralized drinking fountain, etc., the residential NF elements are designed for removing from water various organics, microbes, viruses and most metallic ions with two or higher valence while retaining part of the sodium, potassium, calcium and magnesium ions, etc., thus improving the mouthfeel of purified water and maintaining the content of mineral nutrition.

Specifications and Major Properties

Model	Active Membrane Area $ft^2(m^2)$	Average Permeated Flow GPD(m^3/d)	Stable Rejection Rate (%)	Minimum Rejection Rate (%)
VNF-1812	4.3 (0.40)	NaCl	100 (0.38)	30±10
		$CaCl_2$		≥ 85
VNF-2012	5.1 (0.47)	NaCl	120 (0.45)	30±10
		$CaCl_2$		≥ 85
VNF-2812	11.2 (1.04)	NaCl	300 (1.14)	30±10
		$CaCl_2$		≥ 85

Notes: The permeate flow of single membrane element may vary within(-20%)-(-20%)

Testing Conditions

Testing Pressure ..... 60 psi (0.41Mpa)
Temperature of Testing Solution..... 25°C
Concentration of Solution (NaCl)..... 250ppm
Concentration of Solution ($CaCl_2$) 250ppm
pH Value of Solution ..... 6.5~8.5
Single Element Recovery 15%

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Nanofiltration Membranes – Industrial-purpose Element

Production Introduction

The industrial nanofiltration element is designed for removing from water various organics, microbes, viruses and most metallic ions with two or higher valence while retaining part of the sodium, potassium, calcium and magnesium ions, etc. Nanofiltration, free of chemical reaction, heating and transformation, can keep the biological activity undamaged and maintain the primary flavor or fragrance of substance unchanged, and is increasingly applied in production of drinking water and in separation and concentration/purification processes for foodstuff, medicine, biological engineering and pollution treatment, etc.

VNF1	Moderate rejection rate; Moderate passage of calcium; High removal of TOC
VNF2	Higher rejection rate; Satisfactory removal of insecticide, herbicide, TOC and transition metals
K Series	Designed for bittern denitration and separation-concentration

Testing Conditions

Testing Pressure .....100 psi (0.69Mpa)
Temperature of Testing Solution.....25°C
Concentration of Solution (NaCl) 2000ppm
Concentration of Solution ($MgSO_4$) 2000ppm
pH Value of Solution.....7.5
Single Element Recovery..... 15%

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Specifications and Major Properties

Model	Active Membrane Area $ft^2(m^2)$	Solution Type	Average Permeate GPD(m^3/d)	Stable Rejection(%)
VNF1-8040	400 (37.2)	NaCl	12000 (45.5)	30 ~ 50
		$MgSO_4$	10000 (37.9)	> 96
VNF2-8040	400 (37.2)	NaCl	10000 (37.9)	90 ~ 98
		$MgSO_4$	10000 (37.9)	> 96
VNF-8040K	400 (37.2)	$MgSO_4$	10000 (37.9)	> 98
VNF1-4040	80 (7.4)	NaCl	2400 (9.1)	30 ~ 50
		$MgSO_4$	2000 (7.5)	> 96
VNF2-4040	80 (7.4)	NaCl	2000 (7.5)	90 ~ 98
		$MgSO_4$	2000 (7.5)	> 96
VNF1-2540	28 (2.6)	NaCl	800 (3.03)	30 ~ 50
		$MgSO_4$	650 (2.46)	> 96
VNF2-2540	28 (2.6)	NaCl	700 (2.65)	90 ~ 98
		$MgSO_4$	700 (2.65)	> 96

Notes: Minimum rejection of MgSO4 is 94%. The permeate flow of single element may vary within ±25%.Testing Conditions

R&D

R & D TEAM

Vontron Technology Co., Ltd. owns an R&D team consisting of experts and engineers with senior educational background, among whom more than 60% have the degree of master, and more than 20% have a doctoral degree.

The R&D Center is devoted to research and development of membrane separation materials, module structure and system application, and has obtained certain achievements in the fields of membrane materials, membrane manufacturing technology and membrane manufacturing equipment.



R&D CAPABILITY

Vontron's R&D Center owns a well-equipped membrane laboratory and a team of experts who, having been engaged in water treatment for many years and having rich experience in practice, are capable of autonomously developing the compound RO membranes widely applicable to the field of water treatment and providing better solutions of system design. By virtue of its solid technical strength, it can ensure the powerful technical support to the customers along with the expansion and extension of product category.

After its establishment, the R&D Center has been focused on overall improving its capability in technical innovation, optimizing the resource allocation for technical innovation and improving the efficiency of technical innovation so as to enhance the competitive power and development impetus of the company.

Key R&D Projects

- State's Key New Product Project: Low-Pressure Compound RO Membrane LP21-8040
- State's Key New Product Project: Energy-saving RO Membrane Element 1812-Sized
- National 863 Project: Experiment and Research of the Application of Compound RO Membrane to Seawater Desalination
- National 863 Project: Development of Key Materials for Energy-Saving Low-Pressure RO Membrane
- National 863 Project: Key Technology on Large Scale Manufacture of High-performance Separating Materials

Acquisition of Patents

As of July 2015, totally 50 patents have been authorized to Vontron, of which 24 items are patents for invention (including 1 patent authorized in Korea) and 26 items for utility model.

Some of the authorized patents include:

1. Patent for Invention: An Oxidation-resistant Composite Reverse Osmosis Membrane; China; [200610051219.X]
2. Patent for Invention: A Method for Production Fouling Resistant Composite Reverse Osmosis Membrane; China; [200610051205.8]
3. Patent for Invention: A Method for Production of Extremely Low Pressure Composite Reverse Osmosis Membrane; China; [200610051192.4]
4. Patent for Invention: An Oxidation-resistant Composite Reverse Osmosis Membrane; Korea; [10-2008-0018854]

Besides, some 20 patents have been submitted, preliminary examined or publicized in USA, Europe, Japan, Hong Kong, Taiwan and PCT, etc.






Design and Research Capability
Inspection and Testing Capability
Process Control Capability
Applied Research and Service Capability

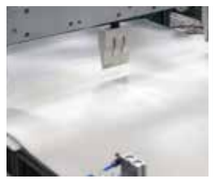
VONTRON

MANUFACTURING

Professional
Manufacture Equipment and Capacity

Vontron owns the core technology for fabricating of membrane sheets, with annual capacity of 17 million square meters of reverse osmosis and nanofiltration membrane sheet.

Besides continuously improving the technological process and formula technology, Vontron has also been reasonably and feasibly conducting technical upgrading and renewal of producing equipment and reconstructed its polyamide RO membrane producing line, thus effectively decreasing the consumption of materials.







ENGINEERING CASES

Project of Beihai Thermal Power Plant – A Typical Reference of Recycled Water Reuse

The project of recycled water recovery and reuse constructed in Beihai Thermal Power Plant subsidiary to Dalian Thermal Power Co., Ltd. was the key project of Dalian City in 2006, and as a project of “Energy Conservation, Emission Reduction, and Development of Circular Economy”, it was favored with priority by the state-level government.

Vontron’s membrane is currently used by Dalian Thermal Power Co., Ltd. for recovery and reuse of polluted municipal water. It is demonstrated in practice that Vontron’s membrane not only has stable and reliable performance after long period of running, but also enjoys the comprehensive properties equivalent to international advanced level.

Engineering Case

Beihai Thermal Power Plant



Place of Project: Dalian, Liaoning Province

Purpose: Reuse of Wastewater
System Capacity: 12,000 T/D
Vontron Membranes Installed: 175 pcs
Model: FR12—8040

After 5 Years’ Operation

Running Pressure: 1.0 MPa
Temperature: 20 ℃
System Rejection: 98%
System Recovery: 75%
Flow Rate of Single Set: 100t/h

Engineering Case

Project of Taiyuan Iron & Steel (Group) Co., Ltd.





Taiyuan Iron & Steel (Group) Co., Ltd. (TISCO) is a large iron & steel enterprises, which has been equipped with largest production capacity in the world and owned the most advanced technology and equipment of stainless steel. The annual steel production of TISCO reached 9.98 million tons in 2013, while sales revenues were RMB 146 billion and profit RMB 500 million, ranking in the forefront of the industry.

Vontron membrane has been used since 2014 in the project of TISCO, for reclamation and reuse of wastewater. The consumption of new water has reduced to 1.45 m^3 for each ton of steel,which is the lowest new water consumption for per ton of steel until now. TISCO has been leading in water-saving and emission-reduction in domestic industry, realizing the win-win strategy of water treatment and wastewater utilization.

Place of Project: Taiyuan, Shanxi Province

Feed Water Quality: Municipal sewage & steel wastewater
Purpose: Process water
Online Time: Early 2014
System Capacity: 34000 T/D
Vontron Membranes Installed: 1071 pcs
Model: New-Type Fouling Resistant Membrane Element

Benefit Analysis of Project

For the wastewater reuse project, the design permeate is 600 m^3/h,and 14000 tons of qualified desalted water are produced from this project per day, saving new water 14000 tons per day and around 5.25 million tons per year.

Engineering Case

Project of Shanghai Coking & Chemical Co., Ltd.

– A Typical Reference of Boiler Water Replenishment

Incorporated in 1958, Shanghai Coking & Chemical Co Ltd is a large-scale chemical enterprise with total assets at RMB 7 billion (about USD 11 billion) and annual turnover at RMB 6.5 billion (about USD 1 billion). An RO system using foreign brand membrane elements was put into operation in a subsidiary of Shanghai Coking & Chemical Co ltd in early 2008. Using the water taken from Huangpu River as its feedwater, the product water was used as the replenishment water for the boiler. The foreign-brand membrane elements were replaced by FR21-8040 elements of Vontron in December 2009.

Following is the comparison of system performance before and after replacement of membrane elements

Item	Before Replacement (End of 2009)	After Replacement (End of 2009)	Initial Operation (Beginning of 2008)	Two Years After Replacementn (December 2011)
Brand	Foreign Brand	FR21-8040	Foreign Brand	FR21-8040
Feedwater Pressure / bar	13.8	10.1	10.8	10.5
Inter-stage Pressure /bar	9.5	9.2	9.9	8.9
Concentrate Pressure / bar	8.33	8.6	9.33	8.1
System Premeate Flow /$m^3 \cdot h^{-1}$	83.33	124	120	113
System Concentrate Flow /$m^3 \cdot h^{-1}$	25.7	40	40.7	36.3
Recovery /%	76.07	75.6	74.7	75.7
Feedwater Conductivity /$\mu S \cdot cm^{-1}$	700	704	720	828
Permeate Water Conductivity /$\mu S \cdot cm^{-1}$	45.7	15	18	26.8
System Rejection /%	93.47	97.9	97.5	97.8
Temperature /℃	25	23.4	22.5	27.6
Energy Consumption /$kw \cdot h \cdot m^{-3}$	0.87	0.59	0.65	0.673

After being replaced with FR21-8040 elements of Vontron, the system has been running in good conditions, and achieved the goal of decreasing energy consumption while the system remains the roughly same performance, testifying that Vontron's membrane products can fully satisfy the requirements of RO treatment system.







List of References

Name of User	Model	Feedwater	Purpose	Online Data	System Capacity(m^3/d)
Shanghai Coking & Chmical Co., Ltd. China(Double-pass RO)	FR21-8040	Surface Water	Boiler Replenishment	2009	8640
China Resources Snow Breweries	LP21-8040/ New-Type Fouling Resistant membrane	Underground Water	For Technological Process	2010	20000
Dalian Development Zone Thermal Power Plant, CGDC	FR11-8040	Reclaimed Water	Boiler Replenishment	2011	7200
A Company in Shandong, China (two-passes RO)	LP22-8040	Reclaimed Water	For Technological Process	2011	24000
A Circuit Board Factory in Shenzhen, China	FR11-8040	Electroplating Wastewater	Industrial water	2011	1500
Shandong Weiqiao Pioneering Group Co., Ltd.	FR11-8040/ New-Type Fouling Resistant membrane	Surface Water	Boiler Replenishment	2012	50000
China Railway Equipment Manufacturing Material Co., Ltd.	New-Type Fouling Resistant membrane	Wastewater	Boiler Replenishment	2013	24000
A Sewage Treatment Plant for Pharmaceutical Project	New-Type Fouling Resistant Membrane	Wastewater	Reclaimed Water Reuse	2014	6000
Dalate Power Plant, China Huaneng Group	New-Type Fouling Resistant Membrane	Surface Water	Boiler Replenishment	2014	5000
Power Plant of China Railway Equipment Manufacturing Material Co., Ltd.	New-Type Fouling Resistant Membrane	Surface Water	For Production Water Supply	2014	16800
Shougang Guiyang Special Steel Co., Ltd.	New-Type Fouling Resistant membrane	Surface Water	For Production Process	2014	7200
sewage plant of China Railway Equipment Manufacturing Material Co., Ltd.	New-Type Fouling Resistant membrane	Wastewater	For Production Process	2014	33000
Tianjin Dagang New Spring Seawater Desalination Co., Ltd.	ULP32-8040	Seawater	Seawater Desalination	2014	100000
SICHUAN COC DISPLAY DEVICES CO.,LTD(COCPDP)	New-Type Fouling Resistant membrane	Tap water	Ultrapure Water	2014	10000
Colgate-Palmolive (China) Co., Ltd.	HOR-8040	Tap water	For Technological Process	2014	3000
Dongguan Liande Woolen Co., Ltd.	FR11-8040	Printing and Dyeing Wastewater	Reclaimed Water Reuse	2014	5000
Foxconn Technology Group	LP22-8040	Tap water	Ultrapure Water	2014	35000
Kunming Iron & Steel Holding Co., Ltd.	ULP32-8040	Surface Water	Reclaimed Water	2014	11520
Guizhou Tyre Co., Ltd.	New-Type Fouling Resistant membrane	Surface Water	Surface Water	2014	2400
Chongqing Huafeng Chemical Co., Ltd.	LP2-8040	Surface Water	Surface Water	2014	9600
Tangshan Iron & Steel (Group) Co., Ltd.	FR12-8040	Steel Wastewater/ Surface Water	For Technological Process	2014	30000
Hangzhou Wahaha Group Co., Ltd.	LP22-8040	Tap water	Pure Water	2014	7200

SALES AND SERVICE



Pre-sales Service

Contents of Service

Promotion plans for new product, new technology, new application field; Plans of product and technology advertisement and promotion in professional fields, professional periodicals or other media.

During-sales Service

Contents of Service

Program of training on know-how and skills of product application and inspection; Program of providing or participating in the design of RO system.

Process Flow

The Marketing Dept and the R&D Center shall provide the customers with on-site training on know-how and skills of product application and inspection, and shall participate in design of customer's RO system and on-site instruction, and help the customers in establishing and implementing the standards for product application, inspection and maintenance as well as the working instructions.

After-sales Service

Contents of Service

Acceptance and disposal of complaints on quality assurance service and product quality; Acceptance of customers' request for service; Solicitude on Customers, etc.

Flow Process

A.In case of product quality problem beyond the quality assurance terms:
The regional sales manager shall submit the "Request for After-sales Service", and the quality assurance manager shall dispose of it according to "Control Procedure on Customer's Complaint"

B.In case of product quality problem within the quality assurance terms:
The regional sales manager shall submit the "Disposal of Complaint on Product Quality".

Request for technical service after sales: The regional sales manager shall fill in the "Request for After-sales Service" and submit it to the Chief Technical Officer so as to arrange relevant personnel to provide relevant service.

Request for sales service after sales: The regional sales manager shall fill in the "Request for After-sales Service" and submit it to the Vice President of Marketing so as to arrange relevant personnel to provide relevant service.

Solicitude service to customers: The Vice President of Marketing shall organize the marketing executive and promotion executive or sales executive to conduct this service according to the Service Program.

Service Web – Overseas

Not only covering most region in China, VONTRON's membrane products have been also exported to many countries and regions in the world, including India, Italy, Spain, Germany, Turkey, Korea, Japan, Vietnam, Thailand, USA, Canada, Brazil, Singapore, Taiwan, etc. By virtue of its superior quality and solid brand effect, VONTRON has won high appraisal publicly from the international market.



Service Web – Domestic

Vontron Technology Co., Ltd. owns and operates a manufacturing plant in Guiyang, and has set up sales service sites in major cities of China, including Shanghai, Guangzhou, Wuhan, Ji'nan, Xi'an, Zhengzhou, Chengdu, etc.

