Take Risk Out…Put *Advantex®* Glass In

CASE STUDY

Advantex® Fiberglass Reinforcement Materials Used in the Largest Water Treatment Project in Asia

The Phase II TUAS seawater desalinization project in Singapore is the largest water treatment project in Asia. When completed, the facility is anticipated to produce approximately 320 thousand cubic meters of water daily. The 4,860 membrane housing pressure vessels (Fig. 1) used in this expansive project are provided by Haerbin ROPV Industry Development Center (ROPV). Advantex® fiberglass reinforcement materials are key components used in producing these pressure vessels.

Manufacturing process

- Filament winding

Resin system

- Ethoxyline resin

Reinforced material

- Advantex® E-CR fiberglass reinforcements
- Direct roving

Market

- Seawater desalinization
- Water treatment

Figure 1

ROPV is currently the largest and most advanced and experienced professional manufacturer of fiberglass pressure vessels for water treatment and has one of the strongest quality control systems in China. ROPV started its independent research and development in 1984 and offers the most diverse and best-performing applications within the water treatment industry.

According to An Jingbo, Deputy General Manager of ROPV, “We always strive to use the best materials in the market, and fiberglass plays an important role in the corrosion resistance of the membrane housing. The membrane housing is designed to withstand osmotic pressure and offer corrosion resistance, and some clients require ASME certified products. We have found that some membrane housing products fail in corrosive

environments, so high quality raw materials like Advantex® fiberglass reinforcement are very important to us," Jingbo continued.

Wang Qiyuan, Deputy General Manager of ROPV in charge of quality control, added “Despite the variability of corrosive mediums within the variety of materials in the membrane housing vessels (Fig. 2), using high quality materials like Advantex® fiberglass reinforcement materials with superior corrosion resistance is necessary to effectively manage the challenging conditions.”

Figure 2

ROPV Production Supervisor Yang Dongwei asserted, "In order to choose the best fiberglass materials, we tested a variety of products provided by different suppliers and found that Advantex® E-CR fiberglass from Owens Corning offered outstanding performance and durability, including excellent corrosion resistance in the harsh acidic experimental conditions." Advantex® glass is a patented boron-free glass formulation that is a corrosion-resistant E-CR glass fiber reinforcement meeting ISO 2078 and ASTM D 578 standards and demonstrating proven performance in the field for more than 15 years. It also offers increased mechanical properties compared to standard E-glass and E-CR glasses.

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Owens Corning Customer Contact:

- Haerbin ROPV Industry Development Center: ropv@ropv.com.cn. Headquarters: Room 2501, 25th Floor, Pufa Mansion, No. 209, Changjiang Road, Nangang. District: Haerbin, Heilongjiang. Tel: 0451-82267301. FAX: 0451-82267303. P.C.: 150090. Base: ROPV Avenue, Economic Development Zone, Dezhou, Shandong.

Owens Corning Advantex® Corrosion-Resistant Glass Fiber Reinforcements:

Email: Advantex.americas@owenscorning.com; Advantex.europe@owenscorning.com; Advantex.asiap@owenscorning.com

For more information call: (614) 777-1384

OWENS CORNING
COMPOSITE MATERIALS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659
1.800.GET.PINK™
www.owenscorning.com
www.ocvreinforcements.com

EUROPEAN OWENS CORNING
FIBERGLAS, SPRL.
166, CHAUSSÉE DE LA HULPE
B-1170 BRUSSELS
BELGIUM
+32.2.674.82.11

OWENS CORNING COMPOSITE SOLUTIONS
BUSINESS ASIA PACIFIC REGIONAL HEADQUARTERS
UNIT 01, 02, 05, 39/F, PUDONG KERRY PARKSIDE
1155 FANG DIAN ROAD, PUDDONG
SHANGHAI 201204
CHINA
+86.21.6101.9666

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