



筠诚和瑞  
JCHR ENVIROGROUP

# YHR TANKS & SILOS

GLASS FUSED TO STEEL

EPOXY COATED STEEL

STAINLESS STEEL



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FOR A BETTER ENVIRONMENT



# ABOUT YHR

Beijing Yingherui Environmental Technology Co., Ltd (as known as YHR), a Chinese National High-Tech Enterprise, is the global industry leading designer, manufacturer and erector of Bolted Steel Tanks and Silos. YHR has two modern and cutting-edge manufacturing facilities in Caofeidian city and Jinzhou city, Hebei Province, China.

In December 2019, YHR Environment and Guangdong Juncheng Biotechnology Co., Ltd. merged and reorganized into Junchengherui Environmental Technology Group Co., Ltd (referred to as "JCHR"). JCHR is a holding subsidiary of Guangdong Juncheng Investment Holding Co., Ltd., a Wens Group company.



A WENS GROUP COMPANY

- The first and the largest Glass-Fused-To-Steel Tank and Epoxy Coated Steel Tank manufacturer in Asia
- The first Chinese Glass-Fused-To-Steel Tank manufacturer certified by NSF/ANSI 61 Standard
- YHR drafted the Chinese Standard QB/T 5379-2019 for Glass-Fused-To-Steel Tanks



## OUR PRODUCTS

### Glass Fused To Steel Tanks

Combines the advantages of both materials – the strength and flexibility of the STEEL and highest corrosion resistance of the GLASS.

### Epoxy Coated Steel Tanks

Fusion Bonded Epoxy (FBE) is an electrostatically applied coating system with superior coverage and uniform coating thickness.

### Stainless Steel Tanks

Stainless steel bolted tanks utilise the inherent corrosion resistance of stainless steel which can be used in many storage applications.



# GLOBAL MARKET DISTRIBUTION

Currently YHR has delivered and built Bolted Steel Tanks and Silos in more than 60 countries and regions, this is all contributed by our local partners together.

World is big and small. The global market is very big but we can make it small by our close cooperation. Are you looking for a reliable partner? We would like to be that one.

**60+**  
More than 60 countries and regions



## OUR CLIENTS



# GLASS FUSED TO STEEL<sup>®</sup>

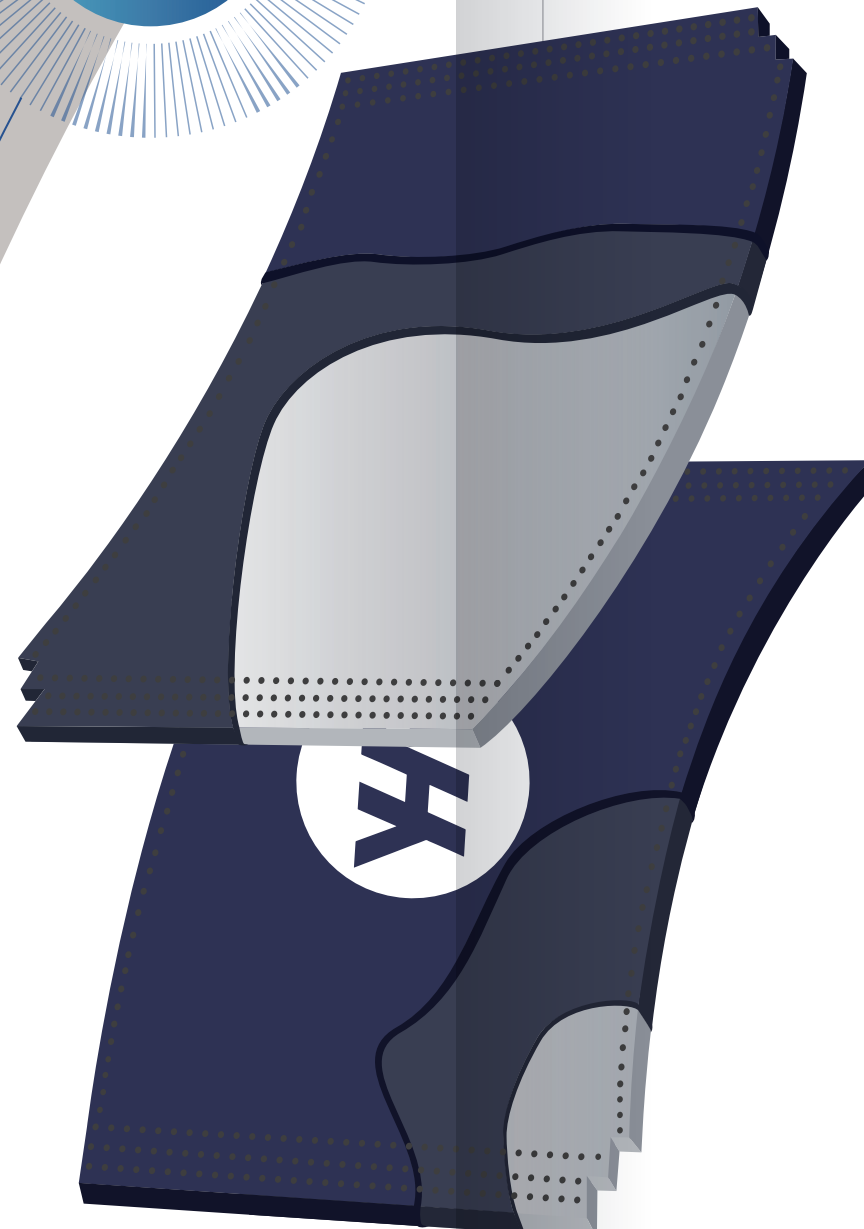
YHR Glass-Fused-To-Steel Technology, is a leading solution combines the advantages of both materials – the strength and flexibility of the STEEL and highest corrosion resistance of the GLASS. The Glass fused to the Steel at 1500 – 1650 deg. F (800 - 900 deg. C), become a new material: GLASS-FUSED-TO-STEEL with perfect anti-corrosion performance.

YHR has developed high-strength TRS (Titanium Rich Steel) plates specially produced for the Glass-Fused-To-Steel Technology, which can work perfectly with our glass frit and can eliminates the "Fish Scale" defect.



- 01 Excellent anti-corrosion performance
- 02 Fast installation with better quality: design, manufacturing and quality control in factory
- 03 Safe, skill-free: less working aloft, no need for long time worker training
- 04 Less influenced by local weather
- 05 Maintenance-free and easy to repair
- 06 Possible to relocate, expand and reuse
- 07 Beautiful appearance

- Top Coat
- Base Coat
- Base Steel








# SPECIFICATION

## YHR GLASS-FUSED-TO-STEEL TANK SPECIFICATION

Standard Color	RAL <b>5013</b> Cobalt Blue
Coating Thickness	<b>0.25-0.45</b> mm
Coating Process	Standard <b>2</b> coats, <b>3</b> coats available
Adhesive	<b>3450</b> N/cm
Elasticity	<b>500</b> KN/mm
Hardness	<b>6.0</b> Mohs
PH Range	Standard Grade <b>3~11</b> ; Special Grade <b>1~14</b>
Holiday Test	acc. to tank application, <b>900V</b> to <b>1500V</b>
Service Life	more than <b>30</b> years

### Standard Color

 RAL **5013** Cobalt Blue

- Optional Colors:
-  RAL 6002 Leaf Green
  -  RAL 6006 Grey Olive
  -  RAL 9016 Traffic White
  -  RAL 3020 Traffic Red
  -  RAL 1001 Beige (Tan)

### Certifications & Capabilities

- QB/T 5379-2019
- NFPA 22
- NSF/ANSI 61
- AWWA D103
- OSHA PT. 1910
- Holiday Testing
- EN ISO 28765
- ISO 9001:2015



# EPOXY COATED STEEL

Fusion Bonded Epoxy (FBE) is an electrostatically applied coating system with superior coverage and uniform coating thickness. AkzoNobel high-tech RESICOAT R4-ES used on the internal surface combined with the ultra durable INTERPON D2525 on the external surface ensures high performance corrosion resistance for storage tanks and silos.



The internal coating RESICOAT R4-ES is NSF/ANSI 61 certified for drinking water contact, and the internal contact surface of every panels are zero defects tested at 1100v before delivering to the clients.

## Internal Coating - RESICOAT® R4-ES

Application	Test	RESICOAT® R4-ES
Dry Film Thickness	Non-Destructive Test	6-10 mils / 150-250 microns
Hot Water Immersion 90 days, 70 °C	AWWA C550-05	Pass
Adhesion after 7 days, 90 °C water	ISO 4624	≥16MPa
Corrosion Resistance	Salt Spray ISO9227 / ASTM B117	Meets or exceeds industry norms
Impact Resistance	ASTM G14 3.2mm(1/8 in) steel plate	≥18 Joule
PH Range	-	3-13
Abrasion Resistance	Abrasion wheel ASTM 4060	CS-17, 1000g, 1000 cycles <40mg
Hardness	ISO15184 / ASTM D3363	2H
Chemical Immersion	50% NaOH, 50% H <sub>2</sub> SO <sub>4</sub>	2 years no change
Holiday Test	1100v every panel	Discontinuity free (Zero defects at test voltage)

## External Coating - INTERPON® D2525

Application	Test	INTERPON® D2525
Dry Film Thickness	Non-Destructive Test	6-9 mils / 150-230 microns (combination of an epoxy primer and polyester topcoat)
UV Resistance	Florida outdoor exposure testing	5 years
Color Stability	Florida outdoor exposure testing	5 years
Impact Resistance	ISO 6272	Pass Qualicoat Class 2 Requirements

# STAINLESS STEEL TANKS



Indonesia

## Gudang Garam Clove Silo Project

1630m<sup>3</sup>\*15  
Tank Capacity

Φ 11.39\*16.72m (H)\*15  
Tank Dimensions

2020  
Construction Time

Stainless steel is a group of iron-based alloys that contain a minimum of approximately 11% chromium that prevents the iron from rusting and provides heat-resistant properties. Stainless steel bolted tanks and silos utilise the inherent corrosion resistance of stainless steel which can be used in many liquid and dry bulk storage applications.

Without the need for any further protection stainless steel tanks and silos can give robust long-term service with the added benefit of an excellent recycling value when the tank is no longer required.



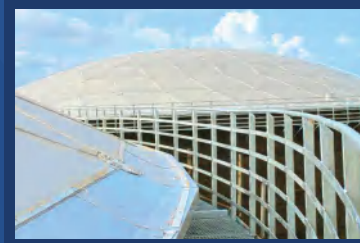
# YHR TANKS & SILOS APPLICATION



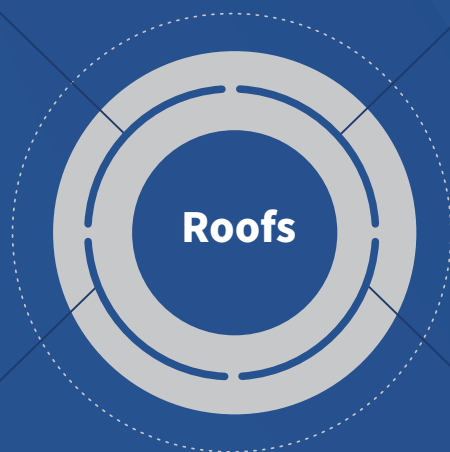
Conical Steel Roof



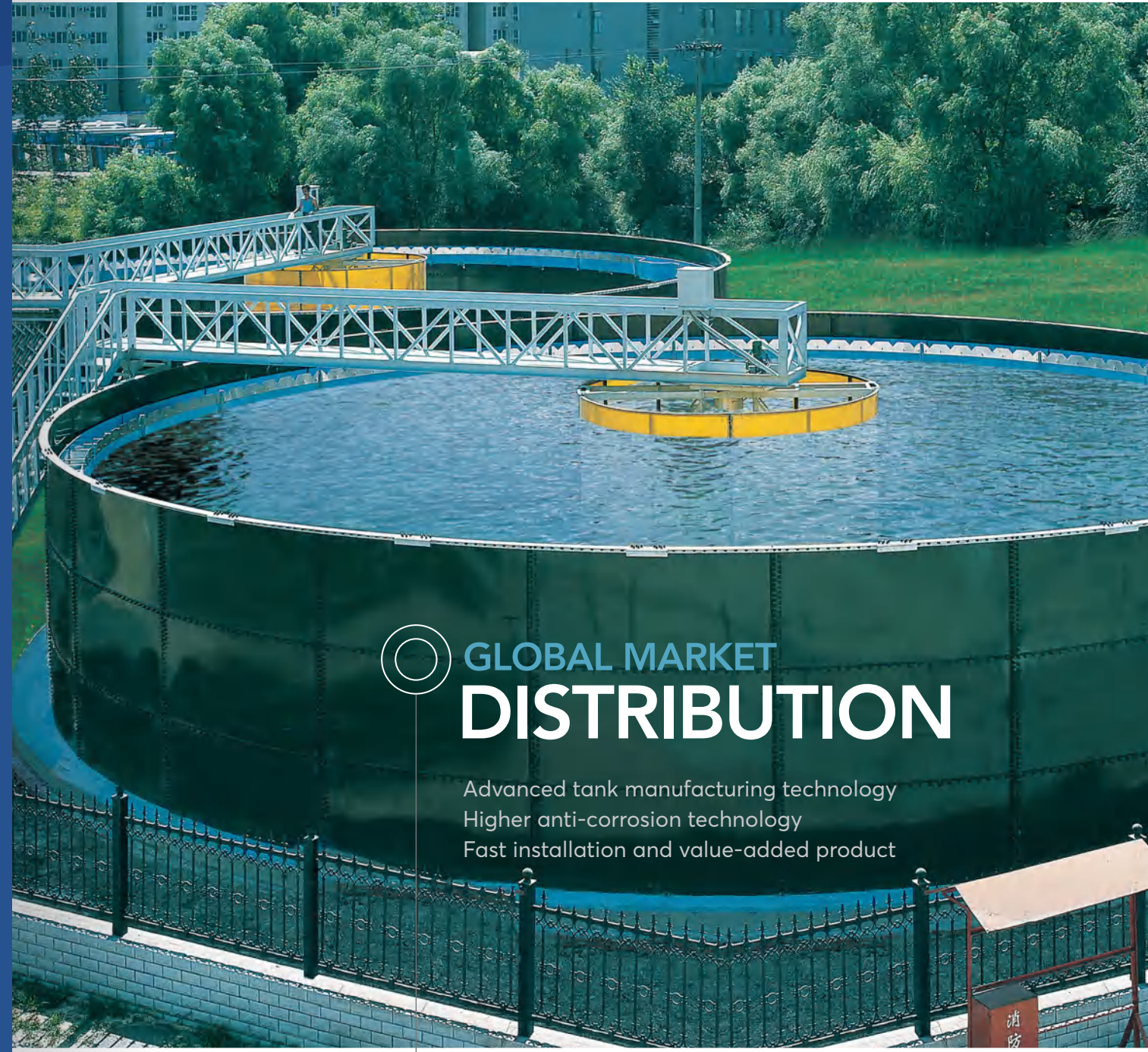
Aluminum Geodesic Dome Roof



Aluminum Trough Deck Roof

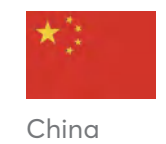


Double Membrane Roof



## GLOBAL MARKET DISTRIBUTION

Advanced tank manufacturing technology  
Higher anti-corrosion technology  
Fast installation and value-added product



**Olympic Park Sewage Treatment Project for 2008 Beijing Olympic Games**

**320m<sup>3</sup>\*4**  
Tank Capacity

**Φ 10.7 m\*3.6 m(H)**  
Tank Dimensions

**2006**  
Construction Time



### Manila Water Potable Water Storage Project

Philippines  
**5390m<sup>3</sup>\*4**  
 Tank Capacity

**Φ26.74\*9.6 m(H)\*4**  
 Tank Dimensions

**2015**  
 Construction Time



### ABEE Biogas Plant Project

Greece  
**170m<sup>3</sup>\*2, 810m<sup>3</sup>\*4**  
 Tank Capacity

**Φ7.64\*3.6 m(H)\*2, Φ10.7\*9 m(H)\*4**  
 Tank Dimensions

**2013**  
 Construction Time



### Danone WWTP Project

Russia  
**280m<sup>3</sup>\*1, 650m<sup>3</sup>\*2, 740m<sup>3</sup>\*1**  
 Tank Capacity

**Φ6.11\*9.6 m(H),  
 Φ10.7\*7.25 m(H)stainless steel tank\*2,  
 Φ9.93\*9.6 m(H)**  
 Tank Dimensions

**2016**  
 Construction Time



### Red Bull Malt Whiskey Alcohol Wastewater Storage Project

Thailand  
**1740m<sup>3</sup>**  
 Tank Capacity

**Φ17.57\*7.2m(H)**  
 Tank Dimensions

**2020**  
 Construction Time



### Chery Automobile WWTP Project

Brazil  
**110m<sup>3</sup>\*2, 420m<sup>3</sup>\*2**  
 Tank Capacity

**Φ6.11\*3.6 m(H)\*2,  
 Φ12.22\*3.6 m(H)\*2**  
 Tank Dimensions

**2013**  
 Construction Time



Costa Rica

### ASADA Potable Water Storage Project

**140m<sup>3</sup>\*1**  
 Tank Capacity

**Φ6.11\*4.8 m(H)**  
 Tank Dimensions

**2020**  
 Construction Time





### AB InBev WWTP Project

**70m<sup>3</sup>\*1, 180m<sup>3</sup>\*1, 220m<sup>3</sup>\*1, 460m<sup>3</sup>\*1**  
Tank Capacity

**Φ3.82\*6.0 m(H), Φ6.88\*4.8 m(H),  
Φ7.64\*4.8 m(H), Φ9.93\*6.0 m(H)**  
Tank Dimensions

**2019**  
Construction Time



### Heineken Sewage Treatment Project

**890m<sup>3</sup>\*1, 110m<sup>3</sup>\*1**  
Tank Capacity

**Φ13.75\*6.0 m(H)\*1,  
Φ5.35\*4.8 m(H)\*1**  
Tank Dimensions

**2019**  
Construction Time

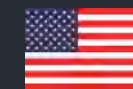


### Petronas (Malacca) Refinery Plant WWTP Project

**700m<sup>3</sup>\*3, 330m<sup>3</sup>\*1, 170m<sup>3</sup>\*1**  
Tank Capacity

**Φ12.22\*6.0m(H)\*3, Φ8.4\*6.0m(H)  
Φ6.88\*4.8m(H)**  
Tank Dimensions

**2020**  
Construction Time



### City of Chicago Fire Water Storage Project

**500m<sup>3</sup>\*1**  
Tank Capacity

**Φ8.8\*8.4 m(H)**  
Tank Dimensions

**2020**  
Construction Time



### Coca-Cola Group Soft Drinks Plant Sewage Treatment Project

**430m<sup>3</sup>\*1, 860m<sup>3</sup>\*2, 170m<sup>3</sup>\*1**  
Tank Capacity

**Φ9.17\*7.2 m(H), Φ12.99\*7.2 m(H),  
Φ6.88\*5.4 m(H)**  
Tank Dimensions

**2020**  
Construction Time



### Nestle Group Potable Water Storage Project

**700m<sup>3</sup>\*2**  
Tank Capacity

**Φ9.17\*11.4 m(H)\*2**  
Tank Dimensions

**2020**  
Construction Time

