

**We are**

**Manufacturing &  
Engineering !**

**GFS tank  
Storage  
Solution**



**WWTP  
Reactor  
Solution**



**Biogas Plant  
AD Solution**



**北京盈和瑞环境科技股份有限公司**

BEIJING YINGHERUI ENVIRONMENTAL TECHNOLOGY CO.,LTD



01

# About YHR



## About YHR

YHR was established in 2005, a Chinese national high-tech enterprise.

Leading company on recycling of Agriculture organic waste.

Biggest Biogas equipment manufacturer in China.

Among the top 3 Biogas EPC contractors in China.

First and biggest GFS tank manufacturer.

We are expanding overseas market now,

Our equipment has been delivered to more than 10 countries.



**7000+**

GFS Tanks installed globally

**400+**

Equipment supplied  
in Biogas industry

**500+**

Sewage treatment reactors  
supplied

**20+**

EPC more than 1 MW  
biogas plants in China



## Professional Team



YHR owns a high qualified professional team. The leader of the company graduate from EMBA of Renmin University of China, who has a wealth of industry experience and advanced business philosophy.

YHR has currently more than 170 employees, with 3 EMBA, 2 PhD, 22 Master and more than 50 high qualified engineers.





## Service



### Equipment manufacturing

GFS tanks, Sewage Reactor, Biogas Digester, Membrane Biogas Holder.

### Biogas EPC

YHR offers service from Consulting, Design, Installation Guidance, Commissioning, After-Sale Service, etc.

### Investment

Investment in agricultural organic waste centralized treatment, including biogas power generation, organic fertilizer production.

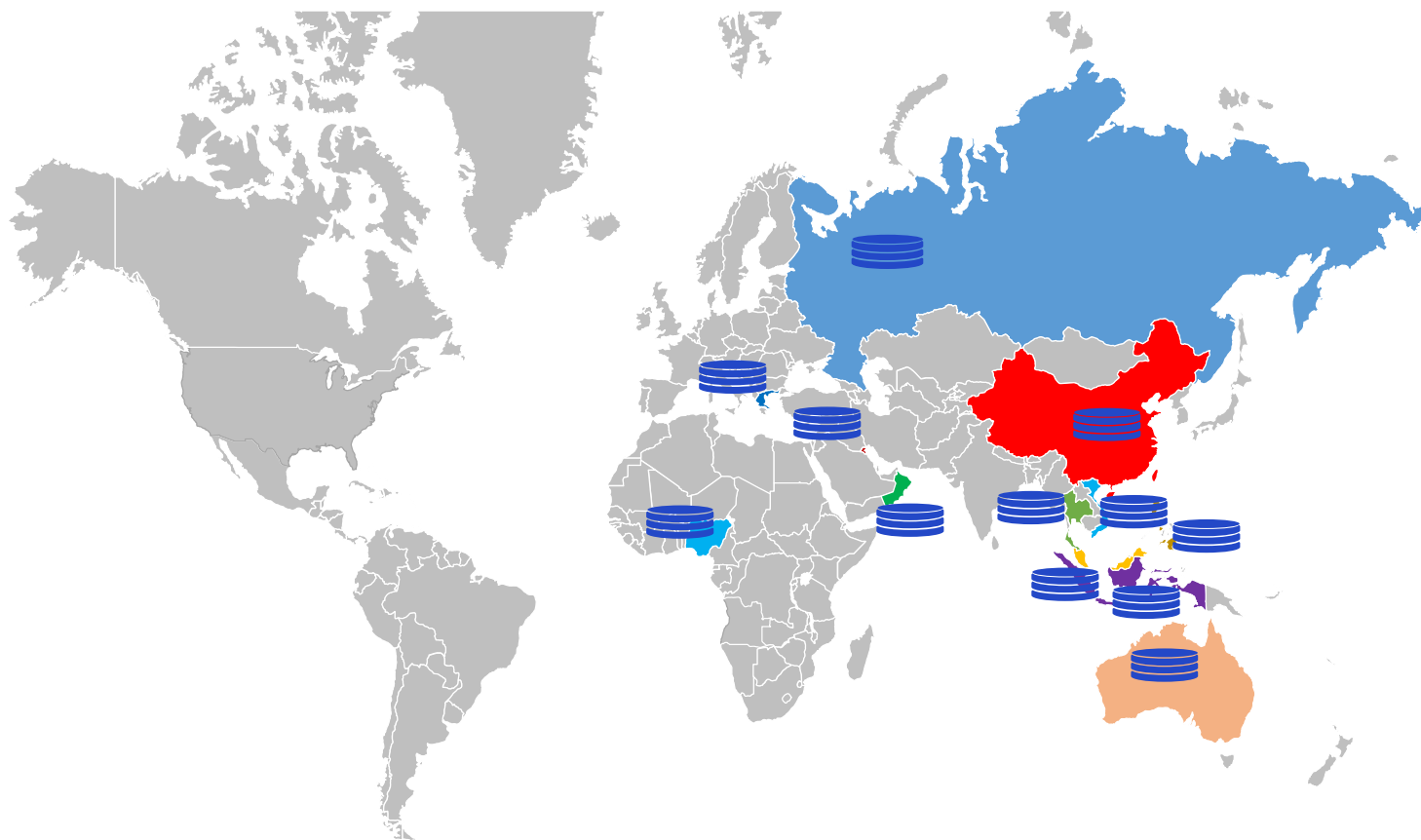
### Operation Management

Biogas Engineering cooperative operation, fully managed operation, leasing operation, etc.

YHR safeguard the project benefits by our expertise.



# Global market distribution



- Currently YHR' s references have distributed in Russia, Southeast Asia, Australia, Middle East, Greece, etc. 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 that one.



02

# Equipment Manufacturer



**Advanced tank manufacturing technology, higher anti-corrosion performance, fast installation and value-added product**

In 2005, the municipal wastewater treatment in Olympics park. We shorten the construction time from 3 months to 30 days.

**Equipment manufacturer-  
Glass-Fused-to-Steel Tank**





# Modularized design and manufacture/Factory quality control/Fast Installation



In 2005, Jiuquan satellite launch center

10,000t domestic wastewater/d treating plant.

It is the first time GFS tank installed in Gobi Desert !

The installation work is done within only two months .

**Dedication for China Space Industry!**





**Mink manure biogas plant**  
**In 2009, Greece Europe**  
**Our tank first entered in European market.**



# GFS Tank Production Line- Upgrading now!




- ◆ One production line with capacity of over 100,000 enameled steel plates annually.
- ◆ A brand-new production line is on the construction.
- ◆ We are built the biggest base in Asia

# 7000+ GFS Tank have delivered worldwide!

## Application field

- ◆ Municipal wastewater, industrial wastewater, drinking water, sludge disposal, livestock effluent
- ◆ Landfill leachate, kitchen waste and Agricultural organic waste.

YHR is a leading company drafting China GFS Tank Industry Standard.



Modularized IC reactor for a paper mill waste water treatment plant.

# Biggest waste incineration plant in Mentougou District, Beijing

Participated in CCTV documentary

-Chinese mega project.

## UBF reactor



We are more than  
a manufacturer.

Biggest effluent reactor  
supplier, serve for 300+  
effluent project.

Include:  
UASB/IC/EGSB/UBF/SBR  
/contact oxidation  
/ Sedimentation Tank.

YHR has proven himself in different conditions for global customers.




▲ Russia



▲ Philippines

◀ Indonesia

▲ Kuwait



**We have designed and supplied Anaerobic  
Digester for 400+ biogas plant**

We continuously optimize our process design. Based on advanced microbial process control theory, we integrate the most advanced mixing system and control system, to provide our customers efficient and stable projects.



# Worldwide Project References

**Vietnam**



**Greece**



**Singapore**



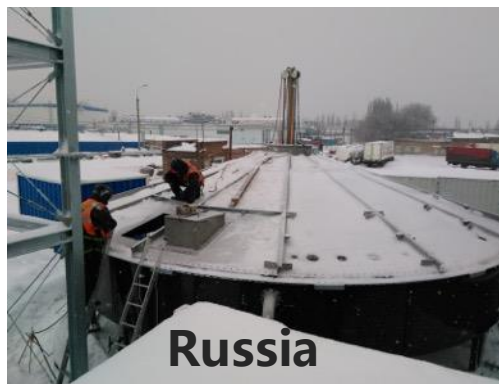
**Thailand**



**Philippines**



**Russia**







## Project Reference - Industrial & Municipal Wastewater





## Project Reference - Drinking Water Storage





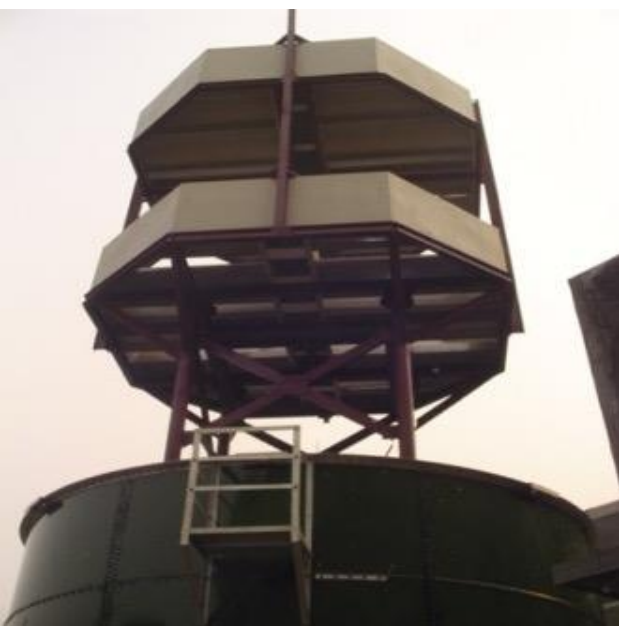
## Modularized Reactor - UASB



Three phase separator - Modularized design & installation



## Modularized Reactor – IC / EGSB



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Three phases separator



03

# Biogas plant AD solution

**We never simply reproduce our design,  
we tailor the solution for each customer.**

The substrate we could use:  
Livestock manure\straw、 MSW, kitchen waste,  
organic wastewater etc.  
POME 、 EFB、 CAKE、 Napier grass、 cassava.

# Co-digestion of Corn Straw & Cow manure

National Bio-Natural Gas Pilot project

Sanhe City, Hebei Province

33,000Nm<sup>3</sup>/d biogas



# Semi-aerobic Hydrolysis Process

A high efficient biological pre-treatment technology for fibrous substrate



Dezhou City . Shandong province

First large-scale biogas plant for bio-methane from corn silage only without manure

Scale: 5MW

Substrate: pure corn straw



# Various livestock slurry co-digestion biogas plant

Regional agricultural organic waste treatment center

Capacity: 2MW CHP + organic fertilizer

Pilot project of regional ecological recycling



# Pure pig slurry biogas plant

**Core technology: Anaerobic Biological Doubling Process**

**A patent process specially designed for low concentration**

- **substrate: pig slurry (TS=2%)**
- **Capacity: 2MW**
- **Guangshui city •Wuhan province**



# Chicken manure biogas plant

- **Substrate:** chicken manure and a small amount of wheat straw
- **Capacity:** 2MW
- **Haian city . Jiangsu Province**





# Cow Manure Biogas Project



DataLoggerHour.PopUpReport

测量进气流量: 测量总量  
JIA\_DPU.FI01.LogAmount  
FIQ-BG-8DU-001

起始时间: 2017/4/28 16:07:54      结束时间: 2017/5/28 16:07:54      查看报表

计算方法: 以天为单位计算总和

2017/4/30	16,482.000
2017/5/1	16,721.000
2017/5/2	15,862.000
2017/5/3	14,451.000
2017/5/4	15,445.000
2017/5/5	15,332.000
2017/5/6	16,926.000
2017/5/7	17,199.000
2017/5/8	17,191.000
2017/5/9	16,607.000
2017/5/10	16,359.000
2017/5/11	16,772.000
2017/5/12	16,843.000
2017/5/13	16,334.000
2017/5/14	16,884.000
2017/5/15	17,056.000
2017/5/16	17,109.000
2017/5/17	16,957.000
2017/5/18	16,867.000
2017/5/19	17,227.000
2017/5/20	18,240.000
2017/5/21	17,803.000
2017/5/22	16,166.000
2017/5/23	17,531.000
2017/5/24	16,725.000
2017/5/25	16,528.000
2017/5/26	17,170.000
2017/5/27	17,082.000

## ▲ Jialihe, Shandong

Substrate: cow manure, 1.5MW TS%4-5%, High gas yield rate  $\geq 1.5\text{m}^3/\text{m}^3.\text{d}$   
with short HRT, down to 12.5d SRT/MRT $\geq 25\text{d}$ ; Gas yield $\geq 550\text{Nm}^3/\text{t VS}$

# Biological Desulfurization System



Different patented process design for different biogas usage:

- Acid type biological desulfurization
- Alkali type biological desulfurization
- Chemical desulfurization

Cases:



Gas flow:1700m<sup>3</sup>/h,  
H<sub>2</sub>S:7000-8000ppm, Alkali  
BDS  
H<sub>2</sub>S Reduction up to 99.5%.





**Double membrane  
Gas storage system**

▲ Chicken manure + wheat straw 2.2MW  
4000m<sup>3</sup> Ground gas holder



▲ Corn Straw + Cow manure 3.3MW  
5000m<sup>3</sup> Ground gas holder



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# THANKS



北京盈和瑞环境科技股份有限公司  
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