



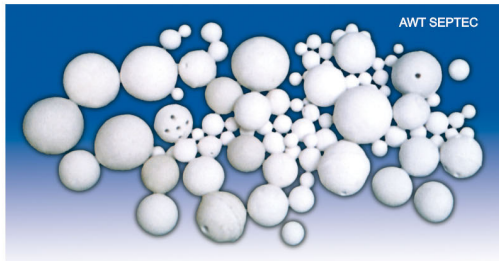
# CERADUR®

## 湖南醴陵威特分离技术有限公司

HUNAN LILING AWT SEPARATION TECHNOLOGY CO.,LTD

Http://www.awt-septec.com

### 瓷球填料 Ceramic balls packing



为满足广大用户的使用要求，我公司开发生产了多种性能优异的瓷球，广泛应用于石油，化工，化肥，煤气，天然气精细化工，环保等行业。

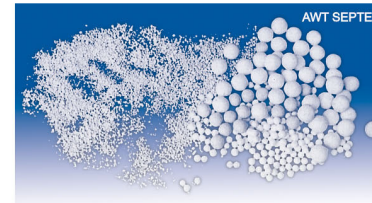
We have developed various series of patent ceramic balls with good performances, which have been utilized in chemical, petrochemical, coal, gas, fine chemicals and environmental protection industries.

### 瓷球产品性能及应用

#### Technical parameter and applications of ceramic balls

| 名称<br>Name                                | 型号<br>Type | 主要技术指标<br>Major specification  | 特性及应用<br>Property and application  |
|---|------------|--|--|
| 惰性瓷球<br>Inert aluminum ball               | DA         | 堆重Bulk density :1300~1800kg/m <sup>3</sup><br>抗压强度Compression strength :0.4~15KN   | 催化剂支撑，覆盖填料<br>Support and covering packings for catalyst   |
| 活性瓷球<br>Activated ball                    | HJ         | 含量Contents :NiO, CaO, MgO, Al <sub>2</sub> O <sub>3</sub><br>堆重Bulk density :680~700kg/m <sup>3</sup><br>磨损Abrasion :<3% | 用于空分干燥脱水<br>Dehydration in air separation  |
| 蓄热瓷球<br>Thermal storage ball              | HJ         | 堆重Bulk density: 1200~1400Kg/m <sup>3</sup><br>热容量Thermal capacity: J/Kg.K<br>操作温度Operating temperature: ~300~1000°C      | 空分工业蓄热式换热器用蓄热填料<br>Thermal storage packing / heat regenerative exchange  |
| 耐火球<br>Refractory ball                    | RF         | 堆重Bulk density: 1200~1400Kg/m <sup>3</sup><br>耐碱度Alkali resistance: ≥1500°C<br>耐火度Refractoriness: ≥1500°C                | 用于合成氨厂变换炉，转化工炉内的催化剂支撑，覆盖填料<br>Catalyst support and covering packings used in shift converter and reformer in ammonia plant |
| 耐磨瓷球<br>Abrasion resistant ball           | MQ         | 堆重Bulk density: 1600~1800(MQA)/2500~3000Kg/m <sup>3</sup><br>磨损Abrasion: <5%(MQA)/<1%(MQZ)                               | 高密度，高强度，耐磨损，无污染的研磨设备中<br>Grinding medium with high density, strength, abrasion   |
| 多孔条纹瓷柱<br>Porous striped ceramic cylinder | DB         | 铝含量Aluminum content: 20~90%<br>堆积密度Bulk density: 400~1850Kg/m <sup>3</sup><br>抗压强度Compression strength: 500N/cm          | 催化剂支撑，覆盖填料及载体<br>Catalyst carrier, covering packings   |

### 瓷砂滤料，陶粒滤料 Filter Ball and Sand

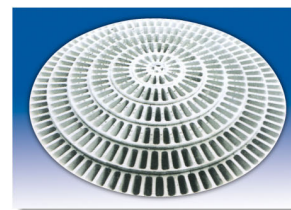


瓷砂滤料具有稳定的化学性能，耐摩擦，耐腐蚀，耐高温，比表面积大，截污能力强，吸附性好，颗粒均匀，比重适当，使用寿命长达15年以上，解决了天然滤料比重单一，易破碎泥化产生有机碳后遗的二次污染问题，广泛用于单层滤池，多层滤池机械过滤器中做过滤介质，处理各种工业污染，工业污水，城市污水，还可用于处理各种工业粉尘，锅炉烟尘。

Filter ball and sand Have stable chemical and physical characteristic such as anti-friction, anti-corrosion, high temperature, large specific surface area, strong intercepting ability, uniform size, it is widely used in the single-layer and multi-layer setting basin as the filter medium to dispose of all kinds of polluted water.

### 支承结构-全瓷球拱

#### Support system-ceramic dome arch



瓷球拱型支承结构是根据传统的瓷砖砌拱型和花岗岩拱型的基础上改进的。其优点是在原来的开孔率只有20~27%。基础上增至50%左右，解决了传统的因净截面积小，而使塔的操作性能受到影响的问题，它的设计先进，使用寿命长，是八十年代开发的一种较先进的支承结构。

Ceramic support system was a high efficient product on basis of traditional ceramic bricks and granites and bricks. Its large opening rate(> 50%) is higher than previous lower 20-27% opening rate, and solve the problem of small free section area of tower, in addition, it has service life and improve the operation capacity of tower.

### 瓷砂滤料的型号及应用

#### Type and application of filter ball and sand

| 项目<br>Item                    | 指标<br>Index | 单位<br>Unit         |
|-------------------------------|-------------|--------------------|
| 耐酸度<br>Acid-resistance        | 99.5        | %                  |
| 耐碱度<br>Alkali resistance      | 82.5        | %                  |
| 抗压强度<br>Compression strength  | 2800~3500   | Kg/cm <sup>2</sup> |
| 硬度<br>Rigidity                | 7           | Mosche Scale       |
| 耐磨度<br>Abrasion               | 0.15~0.2    |                    |
| 耐温度<br>Temperature resistance | >1000       | °C                 |
| 导热系数<br>Thermal conductivity  | 4.415       | KJ/m.h. °C         |
| 比热<br>Specific heat           | 628~837     | J/Kg. °C           |
| 比重<br>Specific gravity        | 2.3         | G/cm <sup>3</sup>  |
| 堆比重<br>Bulk density           | 1.4~1.9     | G/cm <sup>3</sup>  |
| 吸水率<br>Water absorption       | 0.5~2.2     | %                  |
| 破碎率<br>Crack rate             | 0.75        | %                  |
| 空隙率<br>Void fraction          | 28.6        | %                  |

### 球拱主要技术指标

#### Max-opening rate combination ceramic dome arch major specification

| 项目<br>Item                    | 单位<br>Unit        | 指标<br>Index                 | 检测标准<br>Remark |
|-------------------------------|-------------------|-----------------------------|----------------|
| 体积密度<br>Specific gravity      | g/cm <sup>3</sup> | 2.3~2.6                     | ZBG94003-86    |
| 吸水率<br>Water absorption       | %                 | < 0.2                       | GB8488-2001    |
| 抗弯强度<br>Rupture strength      | Mpa               | ≥45                         | GB8488-2001    |
| 抗压强度<br>Compression strength  | Mpa               | ≥200                        | ZBG94003-86    |
| 热稳定性<br>Thermo-stability      | 250~20°C          | 三次不开裂<br>crackle three time | GB8488-2001    |
| 综合开孔率<br>Integrate hale       | %                 | ≥45~60                      |                |
| 产品规格<br>Product specification | m                 | ≤8.3                        |                |
| 耐酸度<br>Acid-resistance        | %                 | > 99.8                      | DIN            |
| 耐碱度<br>Alkali resistance      | %                 | > 87                        | DIN            |
| 弯曲误差<br>Bend error            | %                 | < 0.5                       | DIN            |

规格：本公司从塔径1m~8m的产品已系列化，也可按用户要求设计制造。

Specification: We have a series of the products with 1m~8m tower diameter. And we can also design and produce according to the clients' requirements.