

# TG Type Ceramic Wool (Aluminum Silicate Wool) Products

## 1. Product Introduction



Blocks



Casings



Casings

TG type Ceramic Wool product is made from high quality clay by melting, spraying into fibers and thermal curing processes. The main Ingredients are  $Al_2O_3$ ,  $SiO_2$ ,  $Fe_2O_3$ ,  $K_2O$ ,  $Na_2O$ ,  $MgO$  etc. It can be coated with glass cloth or aluminum foil glass cloth according to the requests of clients. It can be shape into blocks, stiffeners and casings, mainly used as the insulating materials at cabin inner surfaces, stiffeners (T steels and ball steels), cable holders, and frozen pipes, hot water pipes, steam pipes, oil pipes, exposed pipes on open deck etc.

TG Ceramic Wool products have got the certifications of CCS, LR, NK, ABS, EC, BV and DNV.



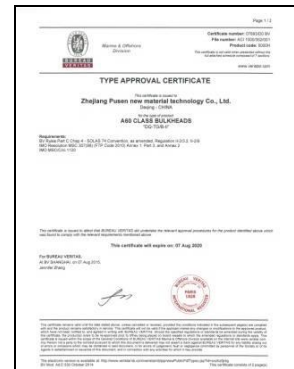
CCS



DNV



ABS



BV



EC



NK



LR

## 2. Technical Specifications

Table 1 TG Ceramic Wool Technical Parameters

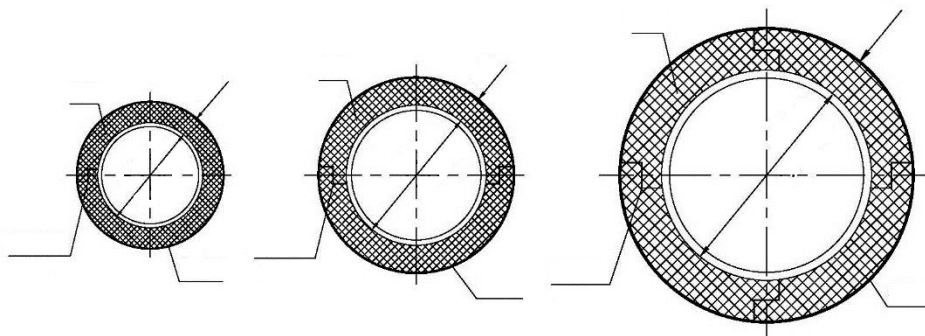
Items	Technical Requirements
Toxicity	Accord with GJB3881, GJB7497 etc.
Non-combustibility	Accord with IMO.2010FTPC Part1 requirement
Asbestos test	Accord with <i>Hong Kong International Covention for the Safe and Environmentally Sound Recycling of Ships 2009</i> .
Apparent Density / kg/m <sup>3</sup>	80 ~200
Moisture Absorption Rate / %	≤ 5
Fiber Diameter / um	≤ 4
Residue Content / % (Φ ≥ 0.25 mm)	≤ 12
Thermal Conductivity (25 ℃) / W/m·K	0.035 ~ 0.038
Liner Heating Shrinkage Rate / %	1000 ℃, 6 h: ≤ 4
Organic Compound Content / %	≤ 2.5
Sound Reduction Index / dB	A60 class bulkhead: 47; A60 class deck (25 mm): 45
Fire Separation Class	A60 class, accord with the requirements of <i>IMO.2010FTPC Part3</i> . Bulkhead: (20+20) mm, two-layer; 170 kg/m <sup>3</sup> ; Deck: 30 mm, one-layer; 170 kg/m <sup>3</sup> ; 25 mm, one-layer; 170 kg/m <sup>3</sup> ; (20+20) mm, two-layer; 170 kg/m <sup>3</sup> ;

### 3. Product Specifications

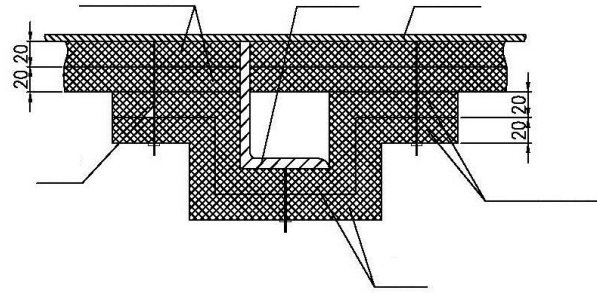
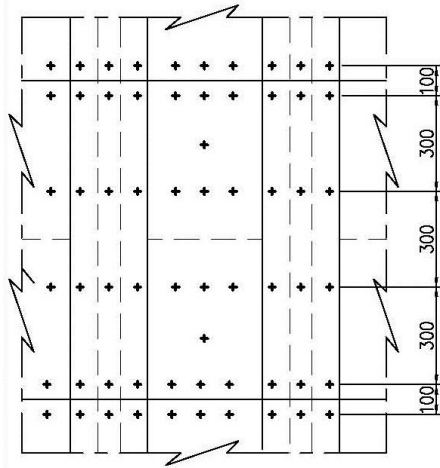
Table 2 TG Type Ceramic Wool Product Specifications

Scope	Fire Separation Class	Type	Density/ kg/m <sup>3</sup>	Dimension / mm			Coatings	Fixation	Areal Density/ kg/m <sup>2</sup>
				T	W	T			
Steel bulk head	A-60	DQ-TG/B-I	170	600 ~ 1000	500~800 Stiffeners according to the stiffener	20+20 two-layer;	Glass cloth or Aluminum foil glass cloth	Stud pins	6.8
Steel bulk head	A-60	DQ-TG/D-II	170	600 ~ 1000	500~800 Stiffeners according to the stiffener	30 one-layer;	Glass cloth or Aluminum foil glass cloth	Stud pins	5.1
Steel bulk head	A-60	DQ-TG/D-III	170	600 ~ 1000	500~800 Stiffeners according to the stiffener	25 one-layer;	Glass cloth or Aluminum foil glass cloth	Stud pins	3.4
Steel bulk head	A-60	DQ-TG/D-IV	170	600 ~ 1000	500~800 Stiffeners according to the stiffener	20+20 two-layer;	Glass cloth or Aluminum foil glass cloth	Stud pins	6.8
Bulk head, deck, pipes	incombustible	TG	80~200	According to customers' requirements.			Glass cloth or Aluminum foil glass cloth	/	/

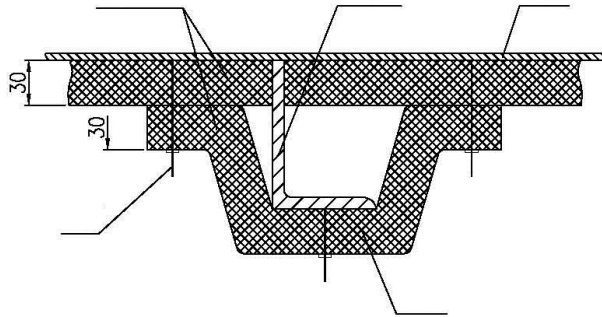
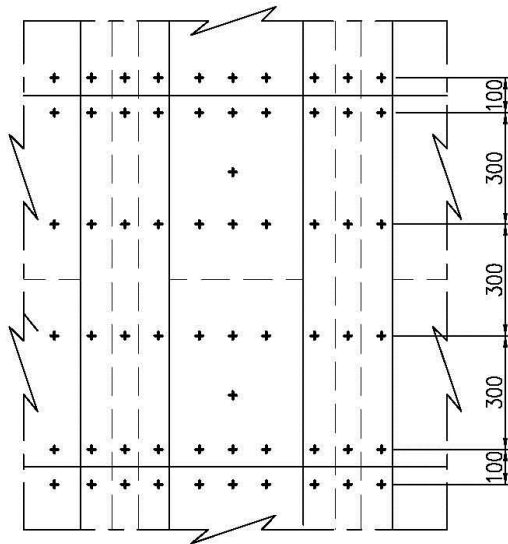
### 4. Structures



Pipe Construction Model



A60 Bulkhead ( DQ-TG/B-II ) typical Detail of TG Ceramic Wool



A60 Deck ( DQ-TG/D-II ) typical Detail of TG Ceramic Wool

## 5. Advantages

TG Ceramic Wool has been used in civil ships as A60 class fireproof material for more than 20 years. It has gotten the certifications of CCS, EC, LR, ABS, DNV, NK, BV, etc. It's of high security, and economical. As A60 class material, it offers enough time to escape from emergencies. To adapt to the usage in ship, 5 mm hard layer is applied to get a hard and smooth surface without affecting the fireproof performance.