

TG-1 Type Highly Purified Ceramic Wool Products

1. Product Introduction



Blankets

TG-1 type highly purified Ceramic Wool product is a class A incombustible material. It is mainly made from aluminum oxide, silicon oxide which can stand high temperature. The minerals are melted and spun into fibers. In the process, a new needle weaving technology replaces the traditional thermal curing technology. As a result, the product is resin free, and has no stimulus on human skin like irritation and allergies.

TG-1 ceramic wool products can fit well with steel plates and prevent the condensation of water as it is soft and tender. It offers excellent fireproof performance, good anticorrosion, sound absorption and thermal insulation. Meanwhile, it is an environmental friendly multifunctional material.

TG-1 ceramic wool products, as a kind of multifunctional inner decorative material with fireproof, thermal insulation, sound insulation and absorption functions, is mainly applicable to cabin panels and ceilings without cover plates, also applicable to T steels, ball steels, cable holds etc., can be used as thermal insulation for ventilation ducts and exhaust pipes.

TG-1 type ceramic wool products have passed the approval of CCS, LR, EC and DNV.



LR



EC



CCS

2. Technical Specifications

Table 2 Technical Parameters

Items	Technical Requirements
Incombustibility	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 ⁻³	110 ± 10
Moisture Absorption Rate / %	≤ 5
Fiber Diameter / um	≤ 4
Residue Content / % (Φ ≥ 0.25 mm)	≤ 10
Thermal Conductivity / W·m ⁻¹ ·K ⁻¹	25 °C, 0.034; 500 °C, 0.136;
Heating Permanent Linear Change Rate / %	1000 °C, 6h, ≤ 4
Thermal Shrinkage Temperature / %	1260
Organic Compound Content / %	≤ 0.5
Fire Separation Class	A60 class, accord with the requirements of <i>IMO.2010FTPC Part3.</i> Bulkhead: (20+20) mm, two-layer; 110 kg/m ³ ; Deck: 30 mm, one-layer; 110 kg/m ³

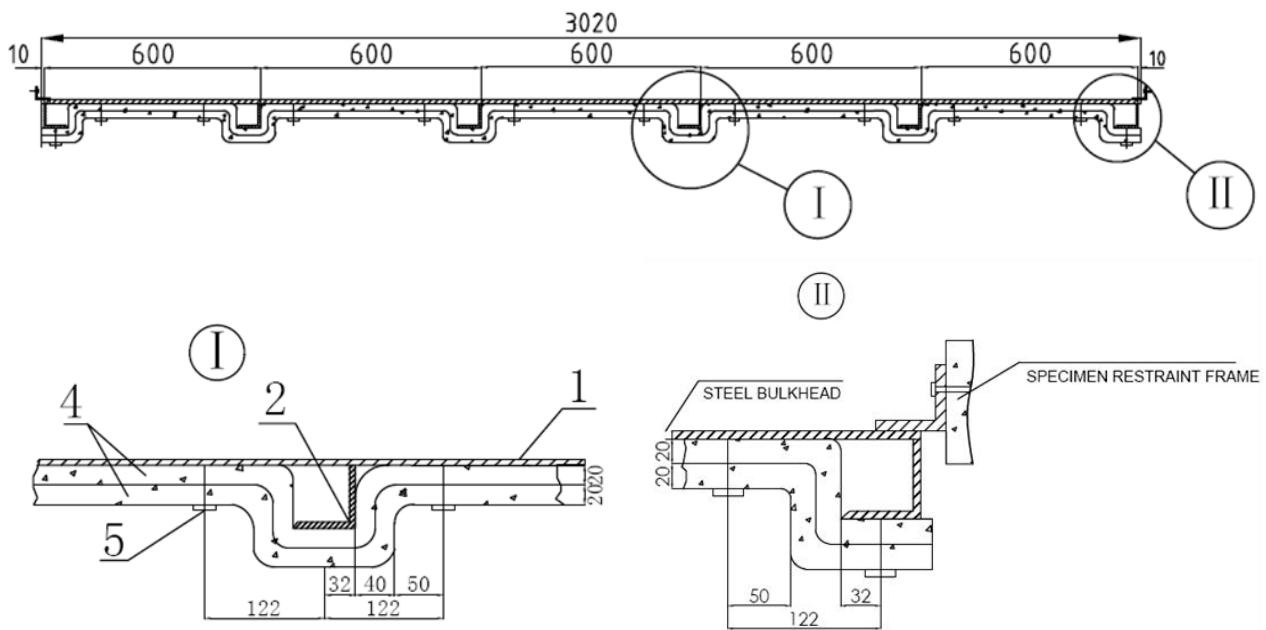
3. Product Specifications

Table 3 TG-1 Type Highly Purified Ceramic Wool Product Specifications

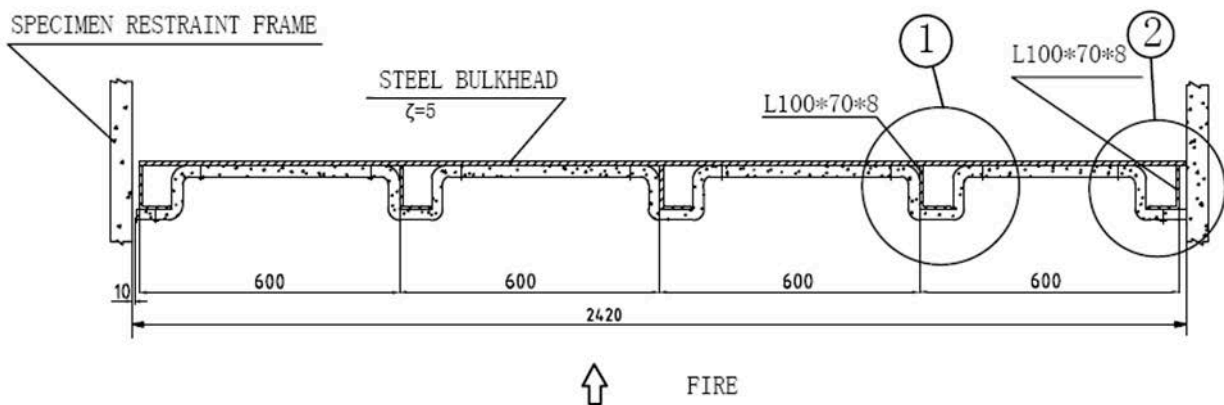
Scope	Fire Separation Class	Type	Density/ kg/m ³	Dimension / mm			Coatings	Fixation
				L	W	T		
Steel bulkhead (steel exposed to fire)	A60	DQ-TG-1/B-V	110±10	≤7200	610	20	Glass cloth or Aluminum foil glass cloth	Stud pins
steel deck (materials exposed to fire)	A60	DQ-TG-1/D-V	110±10	≤6000	610	30	Glass cloth or Aluminum foil glass cloth	Stud pins

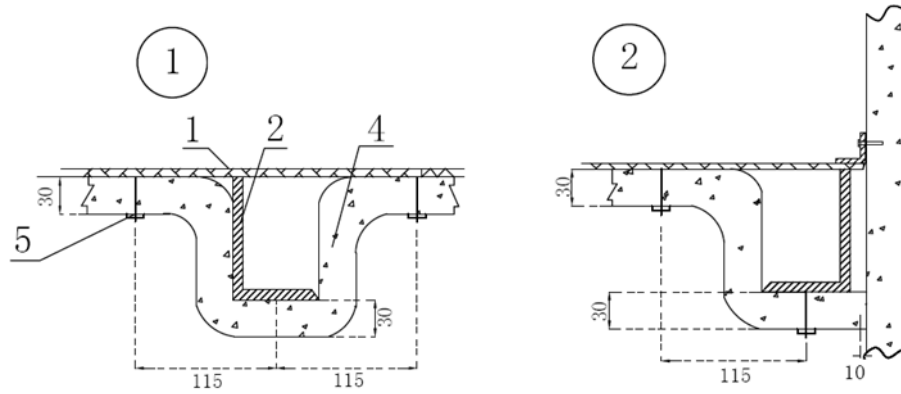
Thermal Insulation	Non-combustibility	TG-1	90 ~ 150	Depand	610	20 ~50	Glass cloth or Aluminum foil glass cloth	Stud pins for bulkhead, glass cloth for pipes;
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4. Structures



A60 Bulkhead typical Detail of TG-1 Ceramic Wool





A60 Deck typical Detail of TG-1 Ceramic Wool

5. Advantages

- Low density ($110 \pm 10 \text{ kg/m}^3$).
The areal weight is about 3.42 to 4.52 kilograms per square meter, reduced about 2.4 kilograms per square meter compared with A60 class ceramic wool with a density of 170 kg/m^3 .
- New needle-waving process.
The soft layer made by the new process is organic free, shows low toxicity, smoke density and thermal conductivity. The performance is more stable, the service life is longer.
- Ease to apply
The blanket is applied continuously.