

DJS Type Super Light Poly Spathic Fire-proof Products

1. Product Introduction



Blankets



Panels



Stiffeners

DJS Super Light Poly Spathic Fire-proof Product is a class A non-combustible composite material with a two-layer structure, hard layer and soft layer. The soft layer is made from several heat-resisting crystal ores contain aluminum oxide (Al_2O_3), silicon dioxide (SiO_2), zirconia (ZrO_2). The ores are made into fibers through melting, fiber drawing geometry and needle-weaving processes. The soft layer produced by the new process is resin, residue and dust free, and has no stimulus on human skin like irritation and allergies.

DJS product is coated with glass cloth outside of the hard layer and soft layer complex by PSJ type flame-retardant white adhesive. The soft layer is the inner layer which can fit well with steel plates and prevent the condensation of water. It offers excellent fireproof performance, good anticorrosion, sound absorption and thermal insulation. The hard layer is the hard and smooth surface with good toughness, impact resistance and compression. As for its flat appearance, putty is unnecessary. DJS is a multifunctional fireproof material for shipbuilding with good safety.

DJS product, as a kind of multifunctional inner decorative material with fireproof, thermal insulation, sound insulation and absorption functions, is mainly applicable to compartments of

outer plates of hull, cabin panels and ceilings, also applicable to T steels, ball steels, cable holds etc., can be used as thermal insulation for ventilation ducts and exhaust pipes.

DJS product has gotten the certificates of CCS and EC.



CCS



EC

2. Technical Specifications

Table 1 DJS Super Light Poly Spathic Fire-proof Products Technical Parameters

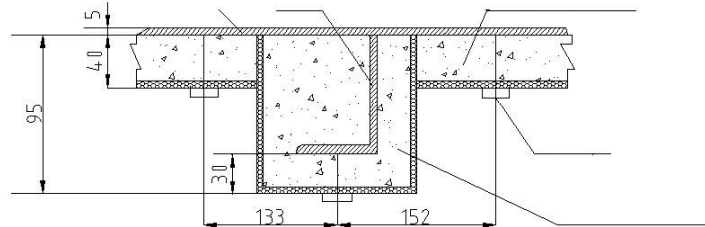
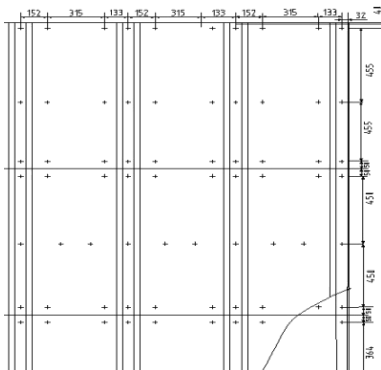
Items	Technical Requirements
Toxicity	Accord with GJB3881, GJB7497 etc.
Non-combustibility	Accord with IMO.2010FTPC Part1 requirement
Asbestos test	Accord with <i>Hong Kong International Covention for the Safe and Environmentally Sound Recycling of Ships 2009.</i>
Apparent Density / kg/m ³	100 ~ 120
Moisture Absorption Rate / %	≤ 0.55
Residue Content / % (Φ ≥ 0.25 mm)	≤ 6
Thermal Conductivity/ W/m·K	25 °C, ≤ 0.032; 500 °C, ≤ 0.127;
Thermal Shrinkage Temperature / %	1400
Heating Permanent Linear Change Rate / %	≤ 4 (1400 °C, 8h)
Organic Compound Content / %	≤ 2.5
Sound Reduction Index / dB	A60 class bulkhead: 47; A60 class deck: 46
Fire Separation Class	A60 class, accord with the requirements of <i>IMO.2010FTPC Part3.</i> Bulkhead: 40 mm, one-layer; 100 kg/m ³ ; Deck: 30 mm, one-layer; 116 kg/m ³

3. Product Specifications

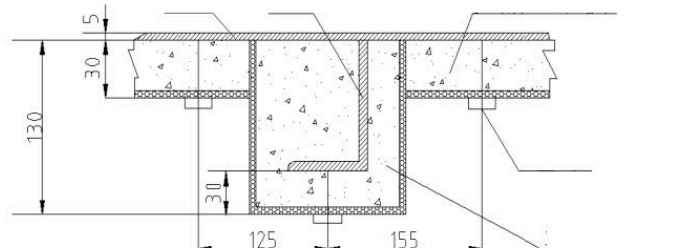
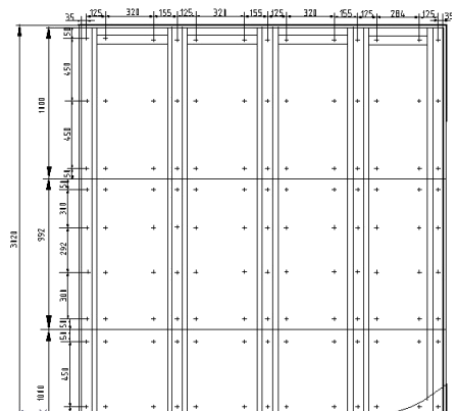
Table 2 DJS Super Light Poly Spathic Fire-proof Products Specifications

Scope	Fire Separation Class	Type	Density/ kg/m ³	Dimension / mm			Coatings	Fixation
				T	W	T		
Steel bulkhead	A60	DQ-DJS/B-V	100	600~1000	800	40 (hard layer included)	Glass cloth or Aluminum foil glass cloth	Stud pins
					700			
					600			
					500			
Steel deck	A60	DQ-DJS/D-V	116	600~1000	800	30 (hard layer included)	Glass cloth or Aluminum foil glass cloth	Stud pins
					700			
					600			
					500			
Stiffener	A60	DJS	116	600	according to the stiffener	30 (hard layer included)	Glass cloth or Aluminum foil glass cloth	Stud pins

4. Structures



A60 Bulkhead (DQ-DJS/B-VI) typical Detail of DJS Products



A60 Deck (DQ-DJS/D-VI) typical Detail of DJS Products

5. Advantages

- Low density (100 ~ 120 kg/m³).

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/m³. The reduced weight can be used to increase fireproof walls so as to improve the level of fire safety of the ship.

- 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.

- One-layer structure.

The total thickness is 40 mm includes 5 mm hard layer, easy to install. Construction cycle is shortened distinctly.

So far, DJS product has been widely used in all kinds of ships. With a good fireproof performance, low density, the sailing speed of ships will increase as the ship weights are lowed. Easy to install, labor intensity is lowed, work efficiency is increased. DJS is a good choice for all kinds of ships and vessels.
