Office No: 412E, Ibn Battuta Gate Office Building, Dubai
Tel No: +971-4-553-0601, Email: info@korner-stone.com

Naval Mineral Wool Fireproof Heat-Insulating Product (PS-2)

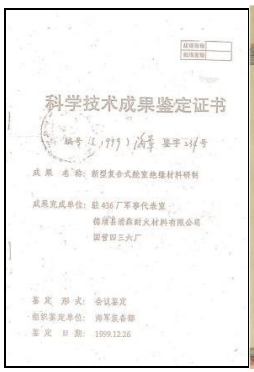
1. Product Introduction

Blocks

Stiffeners

Naval mineral wool fireproof heat-insulating product (PS-2) is a class A non-combustible material with a two-layer structure, hard layer and soft layer. The soft layer is made from several nature ores through melting, centrifuging and curing processes. The hard layer of high strength consists of multiple inorganic mineral fibers and cured by thermal curing. To get final PS-2 products, glass cloth will be coated outside after the hard layer and soft layer being combined, then dry. The soft layer is the inner layer which can fit well with steel plates and prevent condensation of water. It offers good anticorrosion, sound absorption and thermal insulation. The hard layer is a hard and smooth surface with good toughness, impact resistance and compression. As for its flat appearance, putty is unnecessary. PS-2 is a multifunctional insulating material for shipbuilding with good safety.

PS-2 has been approved by Navy Equipment Department and got the third prize in scientific and technological achievements of the Chinese people's Liberation Army Navy. PS-2 products have got the certifications of CCS, EC and ABS.



Navy Approval

Science Third Prize

CCS

EC

ABS

2. Technical Specifications

Table 2 PS-2 Technical Parameters

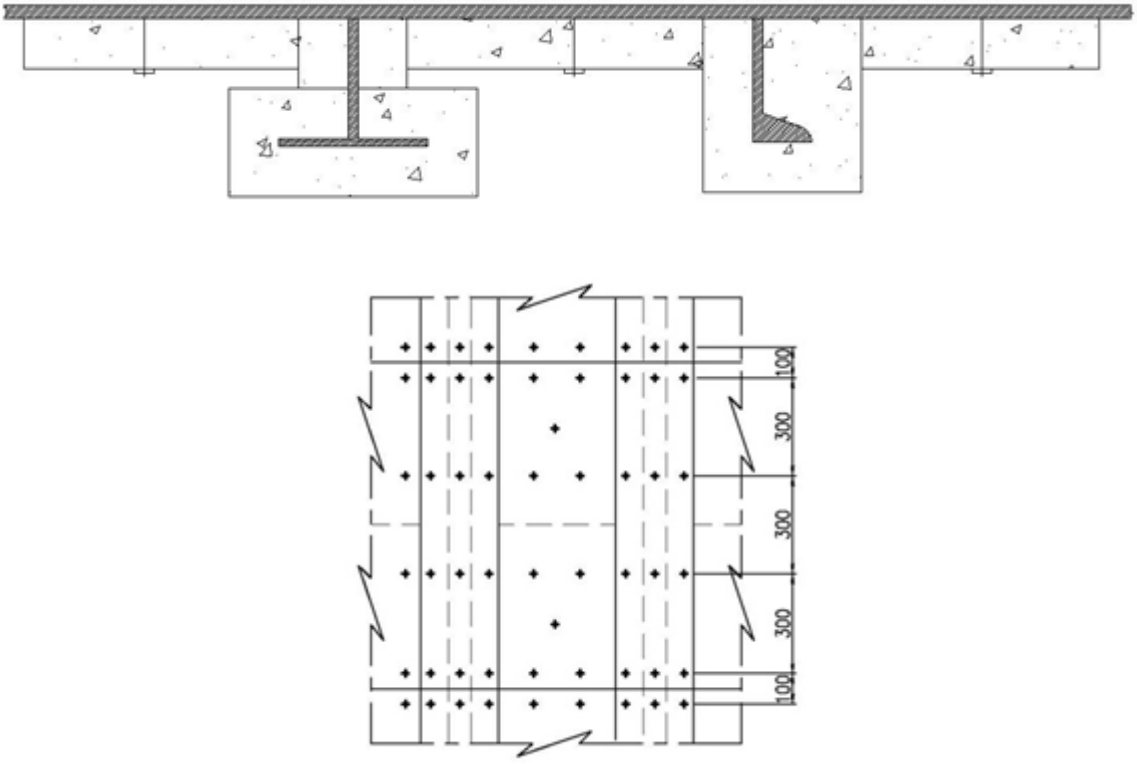
Items	Technical Requirements	
Toxicity	Accord with GJB3881, GJB7497 etc.	
Non-combustibility	Accord with IMO.2010FTPC Part1	
Asbestos test	Accord with *Hong Kong International Covention for the Safe and Environmentally Sound Recycling of Ships 2009.*	
Apparent density / kg/m^3	Blocks: 35 ~ 80; Stiffeners: 80	
Moisture absorption rate / %	≤ 2.5	
Residue content / % (Φ ≥ 0.25 mm)	≤ 1	
Thermal Conductivity / W/m·K	25 ºC, 0.036 ~ 0.040	
Thermal shrinkage temperature / ºC	≥ 300	
Organic compound content / %	≤ 6	
Sound reduction index	21 (Spec: Thickness = 40 mm, Density = 60)	Sound Insulating Mineral Wool
	29 (Spec: Thickness = 50 mm, Density = 80)	
	32 (Spec: Thickness = 60 mm, Density = 90)	
	32 (Spec: Thickness = 75 mm, Density = 100)	

3. Product Specifications

Table 3 PS-2 Specifications

Scope	Class	Density / kg/m^3	Dimension / mm			Coatings	Fixation	Areal Density / kg/m^2			
								T	Density / kg/m^3		
			L	W	T				45	60	80
Steel bulk head or deck	incombustible	Blocks: 35 ~ 80; Stiffeners: 80	400~1000	800	20 ~ 100	Glass cloth	Stud pins	40	1.8	2.4	3.2
				700				50	2.0	3.0	4.0
				600				60	2.7	3.6	4.8
				500				70	3.2	4.1	5.6
			Stiffeners accord with the stiffener					80	3.6	4.8	6.4

4. Structures



Blocks and Stiffeners Construction Model

5. Advantages

- PS-2 is an inorganic non-combustible composite material. It's a multifunctional material with anticorrosion, thermal insulation, sound insulation and absorption, decorative functions. Its service life can be as long as 15 years.
- PS-2 is of high security and more environmental friendly. As inorganic non-combustible material, there's no dripping and decomposition at high temperature. Meanwhile, stud pins are used to fix the materials instead of adhesives.
- PS-2 shows low areal density of about 2.52 to 4.62 kilogram per square meter after being installed.
- Easy to install. Installation process with stud pins is mature and easy to implement. Adhesive and puttying is removed. Adjusting the nut cap to make sure soft layer fits well with steel plate.
- Low comprehensive cost. Construction costs are reduced by removing adhesives and simplifying construction processes.