



# ROCK WOOL SYSTEM





BNBM rock wool materials based on selected basalt as main raw material. Through melting of high temperature, they became abio-fibre manufactured by high-speed centrifugal equipments. After special adhibitor and dust-prevention oil adding and fibre-formed structure changing, they finally formed a newly light quality warm-keeping material. According to different purposes, they can be processed rock wool slab, rock wool felt and rock wool pipe section etc.

They can be broadly used in the heat preservation projects in architecture-building, industry and shipbuilding because of the best heat-insulation, sound-insulation, stable chemical capability, causticity-resistance and incombustibility.

The whole equipments were imported from foreign countries with advancend technology, high automatization. Now, the company has 2 production lines with annual output of 40 thousand ton. It is the largest rock wool materials manufacturer in the country.

## **Quality Guarantee**

BNBM rock wool materials passed ISO9001 Certificate of Quality Management System. It was honoured the credit of international standard (Double-Certificate)' by Beijing Technology Supervision Bureau.

BNBM rock wool achieved authentication certifications of ship' classification from CSS in China, Lzaos in Britain, DNV in Norway, BV in France, ABS in U.S. etc. BNBM rook wool obtained the recommend certificate issued by China Petroleum and Chemical Industry Association









China CCS

American ABS

British Lloyd's

Norway DNV

# Advantages



# Small coefficient of heat conductivity and good capability of heating preservation, outstanding effect of energy-saving

BNBM rock wool fiber is slender and tender, the average diameter is 4-7 m and the coefficient of heat conductivity is between 0.035 and 0.043 W/m • k. The product has good capability of heating preservation and outstanding effect of energy-saving.

#### Stable capability of chemisty chenmistry may keep the long-term using

Ensure better materialization and catamorphism-resistance because of stable chemical elements and high acidity coefficient (the highest can reach about 2.0).

#### No causticity effects the heat preservation materials

The product will not corrode heat presevation materials because of less chlorin hydronium containing. It fits for ASTM C795 standard and GB/T 17393-1998 standard.

#### **Excellent fireproofing capability**

BNBM rock wool materials have been identified the incombustibility by Tianjin Fire Control Department of National Public Security Ministry. The product achieved authentication certifications of ship' classification from CCS in China, Laos in Britain, DNV in Norway, BV in France, ABS in U.S. etc.



BNBM rock wool fiber was equally distributing. Its multihole outside and high-spacing rate inside made it have good effect in sound absorption. This was identified by Physics Graduate School of China National Architecture science Academe.

#### Green building materials and no harm for the boby

BNBM rock wool materials are no harm to the boby because of low organism containing and no asbestos containing. The product is fit for A'-level fitment materials' of GB6566-2001 of 'National Building Material Radio Element Limits'. At the same time it can be used as the carrier of no-earth planting and planting base of vegetables, fruits and flowers.

#### **Broad using range**

BNBM rock wool materials highest using temperature can reach 650°C and it can broadly using in architecture, industry, shipmaking or reprocess etc.

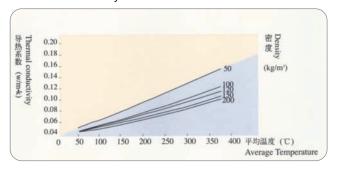




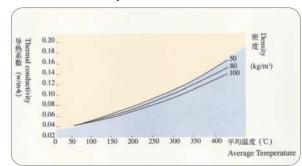


## **Thermal Insulation Properties**

#### Thermal conductivity of slab



#### Thermal conductivity of mat



Note: By the Chiese Acadmy of Sciences

#### Thermal insulation for equipment and pipes

Properties Type	Slab	Faced stitched mat	Pipe section
Density kg/m³	60-180	80-120	100-150
Thermal conduct equation W/m · k	0.035+0.00018 tm	0.035+0.00018 tm	0.036+0.00015 tm
Working temperature	600	600	600
Application field	Equipment with plane or big curve surface	Equipment and large diameter pipes	Pipes with small diameter

#### For architecture

Rock wool products for architecture are usually used in sound and thermal insulation for wall, air-condition pipe and roof. For wall insulation, rock wool slab of 40-100kg/m³ density is usually chosen; for roof insulation, rock wool slab of more than 150kg/m³ density is recommended.

#### For ship

Ship manufacturing requires rock wool products with special properties, BNBM rock wool products are widely used in exported ship made in China. Achievements in shipping system: Dalian Shipyard, Shanghai Jiangnan Shipyard, Shanghai Shipyard, Shanghai east Shipyard, Guangdong Wenchong Shipyard, Jiangxi Chaoyang Machinery Works etc.





#### For industry

Rock wool products are especially suitable for industry insulation because they are of high working temperature and of no causticity. BNBM rock wool products have been widly used in insulation for oil field, chemical industry and power plant.

Achievements in cement industry: Qinhuangdao Qianye Cement Factory, Dianxi Cement Factory of Yunnan Hongta Group, Sichuan Qujiang Cement Factory, Chongqing Fuling Cement Factory, Yaoxian Cement Factory Of Shanxi Qinling Group, Tianjin Zhenxing Cement Factory, Jiangxi Wannianqing Cement Factory, Zhenjiang Dantu Cement Factory, Hangzhou Sanshi Cement Factory, Jidong Cement Factory, Pingdingshan Electrical Dust-precipitator Factory (export to Iran), Laos Wanrong Cement Construction Objest, Shanxi Xinchuan Cement Factory.

Engineering achievements in power station: Suizhong Power Station, Yangzhou Power Station, Australia Melbourne Power Station, Dandong Huaneng Power Station, Iran Araq Power Station, Dayawan Nuclear Power Station, Jiujiang Power Station, Baoji Second Power Station, Pingliang Power Station, Qujing Power Station, Shantou Power Station, Viet Nam Haiphong Power Station, Shang'An Power Station, Pakistan Thermal Power Station, Beijing Huaneng Thermal Power Station, Ligang Power Station, Yangcheng Power Station.

#### For refebrication

## **Technique Properties**

For different working temperature and different form of the insulated body, proper types of BNBM rock wool products can be selected such as slabs, faced stitched mats and pipe section mats, etc. Usually, rock wool slab is used in insulation engineering of architecture, and on industrial equipment with plane or big curve surface; the faced stitched mat is usually used on equipment and pipes with big diameter; pipe section is used on pipes with small diameter.

#### Standard BNBM rock wool products

Product	Density(kg/m³)	Thickness(mm)	Length(mm)	Width(mm)	Remarks
rock wool slab	40	50-80	1200	600	根据用户需要,可在岩棉板 外贴玻璃布或铝箔。
	60	50-80			
	80	40-100	1000	630	
	100	30-100			
	120	40-80			
	150	40-60			
	180	40-60			
rock wool felt	80	50-100	3000	3000 910	根据用户需要,可以加工玻 璃布缝毡或铁丝网缝毡。
	100	40-100		310	
rock wool pipe section	130	30-80	1000	18-350	根据用户需要,可在岩棉管 壳贴玻璃布或铝箔。

Note: Above are standard products, special orders are also available.

#### Main physical properties

Item	Testing result	Standard
Density Tolerance %	8.3	± 15
Binder content %	2.9	≤ 4.0
Working temperature °C	600	≥ 600
Thermal conduct	0.040	≤ 0.044
(70 $\pm$ 5°C) w/(m·k)		
Combustion	Non-combustible	Non-combustible

#### Other reference indexes

Item	Testing result
Average Fiber Diameter µm	5.7
Slag Nodule Content %	4.2
CI <sup>-</sup>	0.0058

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