



华利保温

HUALI INSULATION

柔性可拆卸保温套

Flexible removable insulation cover

天津华利保温建材有限公司

Tianjin Huali Thermal Insulation Building Material Co., Ltd.

Work together to create a better future 携手合作 共创未来



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天津华利保温建材有限公司成立于一九九五年并投产，位于天津滨海高新区塘沽海洋科技园丹江路126号，公司主要从事保温材料的生产（主要包括：岩棉、橡塑海绵、玻璃棉、陶瓷棉、复合花纹铝板、复合岩棉板、防火门、聚氨酯制品、柔性可拆卸保温套等），自建厂以来，我公司不懈地抓生产技术管理、质量管理，已获得了ISO9001、ISO14001、ISO18001管理体系证书，建立了严密的质保体系、环境体系和职业健康安全体系。本公司生产的保温材料先后通过了中国船级社、挪威船级社、法国船级社、美国船级社、日本船级社认可，同时取得了中国船级社工厂认可证书和法国船级社欧共体认可证书。我公司研制开发的复合花纹铝板取得了国家实用新型产品专利，并以优质的产品、优良的服务赢得了用户的一致好评。

工厂占地累计100000平方米，公司注册资金10000万元，现有资产20000万元，现有员工280人，其中管理人员40多名，近年来业务范围不断扩大，设备不断更新改造，现有舾装车间、聚氨酯生产车间、保温制品生产车间、板制品生产线、软保温生产车间、复合花纹铝板生产车间共六个车间。公司保温材料年产量达到10000吨，复合花纹铝板年产量100万平米，复合岩棉板年产量10万平米，并配有一定规模的生产及检测设备。

几年来为海洋石油工程股份有限公司、环渤海地区各大船厂、大港油田、新疆油田及各大石化项目等诸多工程提供了大量的保温材料，产品质量均能达到国家标准，并获用户好评，企业信誉和知名度不断提高。



Company profile

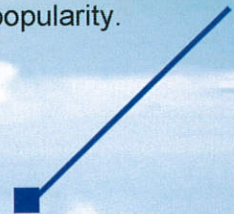
公司简介

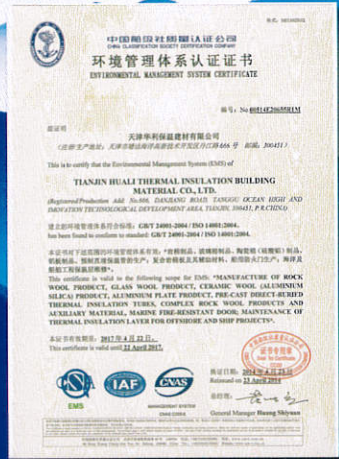
Tianjin Huali Thermal Insulation Building Material Co., Ltd. was founded in 1995 and put into operation, located in No.126, Danjiang Road, Tanggu Marine Science and Technology Zone, Tianjin Binhai High-tech Area. The company mainly produce thermal insulation materials (including: rock wool, FEF, glass wool, ceramic wool, stucco embossed aluminum cladding with moisture barrier , composite rock wool plate, fire door and PUR, removable insulation cover.). Since established, our company's been constantly improving production, technology and quality management, obtained the ISO9001, ISO14001, ISO18001 management system certificates, and established a strict QA and HSE system. Huali insulation materials have been passed the approval of CCS, ABS, LR, BV, GL, NK, etc. The embossed aluminum cladding with moisture barrier acquired national utility model patent, and won the clients' unanimous praise with the excellent quality and service.

The factory covers an area of 100,000m², with registered capital of 100,000,000RMB, current capital of 200,000,000RMB, 280 staff including more than 40 management employee. In recent years, the company continuously expands its business scope, upgrades equipments, covering 6 shops: outfitting, PUR, removable insulation cover, aluminum cladding ,insulation materials and production line for insulation sheet. The annual output of thermal insulation materials reaches 10,000 tons, aluminum cladding achieves 1,000,000m² per year, composite rock wool board is 100,000 m² per year and Huali equipped with production and testing equipments.



For CNOOC offshore oil engineering company, shipyard around Bohai area, Dagang Oilfield, Xinjiang Oilfield and major petrochemical projects, Huali has been providing large amount of insulation materials over the years. All product quality reaches the national standard and obtained client's praise, improving corporate reputation and popularity.





9

qualification honor
资质荣誉



Development history 发展历程



2007年8月17日华利保温建材（大连）有限公司成立，同时投产玻璃棉生产线。

17th Aug.2007, completed Tianjin Huali Thermal Insulation Building Material(Dalian) Co., Ltd and put into operation of glass wool production line.

2005年引进瑞士保温设备，成为中国唯一一家拥有自动化保温设备的厂家。

Year 2005, brought in Swiss equipment, became the unique manufacturer with automatic thermal insulation equipment in China.

From March 2015 to July.2017, Huali independent contracted insulation project of Yamal LNG in Qingdao and Penglai, amount up to 240,000,000RMB.

2015年3月-2017年7月华利保温独自承揽了总造价2.4亿元人民币的青岛Yamal以及蓬莱Yamal项目，历时两年零四个月的辛苦付出，获得业主的一致好评。

2012年公司投产深冷保温领域，与国外多家保温材料生产厂家，例如DUNA、Bellis、ITW、Insutec、等签订长期代理协议，并保持良好的合作关系。

Year 2012, involved in cold insulation, sign long-term agent agreement with international famous suppliers, including DUNA、Bellis、ITW、Insutec and keeping in good cooperative relationship until now.

2010年10月12日大连华星岩棉有限公司成立，同时投产岩棉生产线。

12th Oct.2010, completed Danlian Huaxing Rockwool Co., Ltd and put into operation of rock wool production line.

2006年复合岩棉板和防火门项目投产。

2006年公司通过环境体系认证。

Year 2006, put into production of composite rockwool board and fireproof door.

Year 2006, passed environmental system approval



Flexible removable insulation cover

柔性可拆卸保温套

在石油、石化行业中，设备、管件往往为不规则工件，此类工件的维修需要反复拆装保温层，为此耗费了很多的人力物力。针对此现象，我公司自行研制了一种可按照用户需要、依据设备规格形状量身定做的新产品：柔性可拆卸保温套。此产品具有防冻、防腐蚀、防潮、不燃等特性，同时具备不刺激皮肤、不污染环境、质量轻、安装过程简单、施工方便等优点，并且可以设计为能够与工件完全贴合，易于安装拆卸，并可反复使用。

In the petroleum and petrochemical industry, equipment and pipe fittings are often irregular parts. The maintenance of such parts needs to be repeatedly remove and install insulation covers, which costs a lot of manpower and material resources. In view of this phenomenon, our company has developed a new product which can be customized according to the needs of users and the specifications of the equipment, named flexible removable insulation cover. This product has the certificates of anti-freezing, anti-corrosion, moisture-proof, non-combustibility and so on. It also has the advantages of non-stimulating, friendly to the environment, lightweight, simple and convenient construction, and can be designed to be fully fit with the irregular parts, easy to remove and install, repeatedly use.

→ 耐温度[service temperature]: 0~1000°C

→ 产品厚度[Thickness]: 10~200mm

(通常≥100mm需要分层制作)

[normally, layering equal and above 100mm]

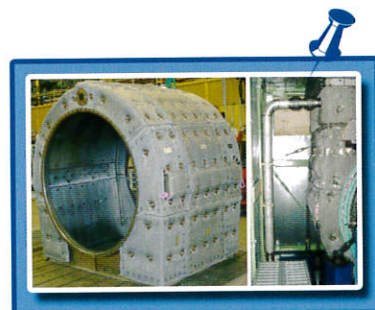
→ 密度[Density]: 100~128kg/m³

→ 导热系数[Thermal conductivity]: 0.035~0.45(w.mk)

→ 加热收缩率[Heat shrinkage]: (600°C × 2H) ≤ 1%

→ 压缩回弹率[Compressional resilience]: 70%

→ 憎水率[Hydrophobic]: ≥ 95%



考虑到产品的长久使用性，我们在产品拼缝处进行双层保护设计，在紧固时带来多一层的安全保护。同时我们的设计也使得产品的连接强度增加70%，避免除极端情况以外的情况下可能发生的断裂。

Considering the long-term usability of the product, we make a double layer protection design at the joint and provide additional protection during fastening. At the same time, our design increases the connection strength by 70% and avoids the possible fracture except the extreme cases.

此产品适用于船舶、化工、冶金、热电、建筑等领域的管道、设备及小型异型结构设备的保温，特别适用于小型异型结构如弯头、法兰、阀门的设备的保温。

Applicable to the ship, chemical industry, metallurgy, thermal power, building in areas such as pipeline, equipment and small special equipment insulation structure, especially suitable for small heterotypic structure such as elbow, flange, valve equipment heat preservation.

Domestic status



国内现状

在现代工业领域里，很多地方由于生产工艺，安全防护等原因，需要做保温。

In the modern industrial field, many places need to be insulated because of the production process, safety protection, etc.

大多数地方，使用传统的保温棉外加铝皮包裹就能实现保温功能，但也有很多地方，用传统保温手段的效果并不理想，有的用传统手段甚至根本无法实施。

However, in most places, the use of traditional insulation material with aluminum cladding can realize heat preservation function, but some other positions, such means of insulation effect is not ideal, some even cannot be implemented by traditional means.

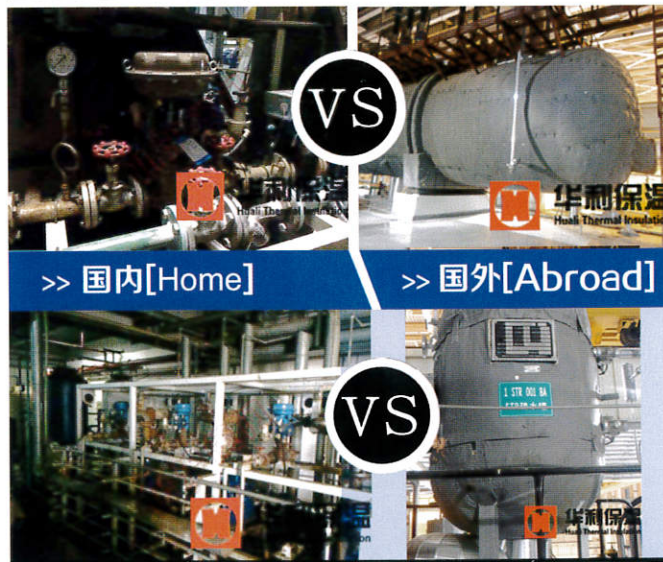


Industrial insulation project-comparison at home and abroad



工业保温项目—国内外现状对比

国内外现状对比



Flexible removable insulation cover-structure



柔性可拆卸保温套——结构

■ 内衬层[Inside liner]

工作温度[Service temperature]: $\leq 1000^{\circ}\text{C}$

特殊情况可以加耐磨层, 比如: 不锈钢丝网等。

Special conditions, can add anti-corrosion layer, like stainless steel wire mesh.

1

■ 保温层[Insulation layer]

起到主要保温作用。

常见的保温层有: 玻璃纤维针刺毡、陶瓷棉毡等。

Heat preservation.

common layers including fiberglass needled mat, ceramic wool.

2

■ 外保温层【Protection layer】

工作温度[Service temperature]: $\leq 260^{\circ}\text{C}$

特性: 防水、防油、防污渍、耐气候老化

Fastures: Waterproof, grease proofing, Stain resistant, weatherable aging.

3

Have you ever
encountered the following situations?

您是否会碰到以下情况？

Flexible removable insulation cover-exclusive nameplate

柔性可拆卸保温套—专属铭牌

Too much
information, the
original design
drawing is gone!
资料太多，最初的
设计图纸不见了！

Such a long time, the
data of insulation
products are lost!

时间太久，保温产品
的数据丢失了！

我们
能为您解决
we can solve for
you

专属铭牌
Exclusive
nameplate

Module ID.: 100-PAR-001 Tag. No.: C1C3FSWK
признание модуль: _____ Tag номер: _____
Line No./трубопровод номер: 114-MR-00014-01
Rating/рейтинг: 600LB Size/размер: DN50
Fitting Type: Ball Valve
приладка тип: Кран шар. фл.
华海保温 TEL:+86-22-6515-3559 http://www.hualibw.com

212-WW-00028-01 10 OF 22
Size/Rating DN50/HE
Material No 7
Fitting Type Valve 4
华海保温 TEL:+86-22-6515-3559 http://www.hualibw.com

唯一的身份编码，可
识别性为您提供更便
捷的售后服务。

Unique identity
coding, and the
recognition
provide more
convenient
after-sales service
for you

Each of our insulation products will have
an unique nameplate, which will ensure
the recognition of the products. If you
provide the nameplate information, we
can make "clone" for you.

我们每一个保温套产品都会有一块专属铭
牌，极大的确保了产品的可识别性，您只要
提供名牌信息，我们就可以为您进行“克
隆”。

Flexible removable insulation cover-classification



柔性可拆卸保温套—产品分类

一、可拆卸式保温套（普通常温型）

General normal temperature type

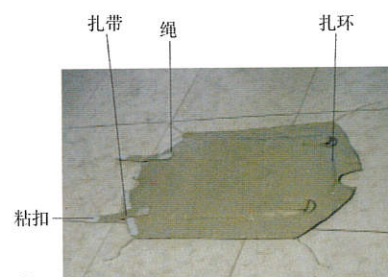
产品编号[Product ID]: HLB I

结构介绍[structure introduction]:

由双面涂覆高强度防护布和憎水复合硅酸盐板材制成

Produced by double coated high strength protective cloth and hydrophobic compound silicate plate

最高适用温度 [highest applicable temperature]: 120°C



普通常温型—结构说明
normal temperature type
structure explanation

二、可拆卸式保温套（普通高温型）

General high temperature type

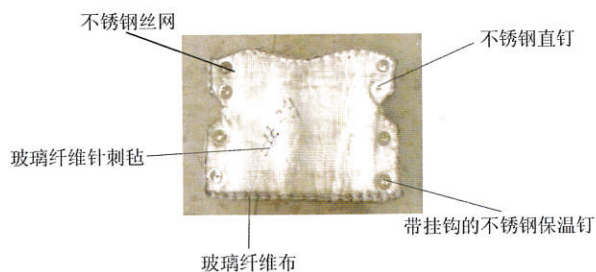
产品编号[Product ID]: HLB II

结构介绍[structure introduction]:

由玻璃纤维针刺毡和双面涂覆硅橡胶的玻璃纤维布制成

It consists of fiberglass needled mat felt and double-sided silicone rubber fiberglass cloth

最高适用温度 [highest applicable temperature]: 500°C



普通高温型—结构说明
normal temperature type
structure explanation

三、可拆卸式保温套（新型常温型） New-type normal temperature

产品编号[Product ID]: HLB III

结构介绍[structure introduction]:

内衬层: 双面涂层硅胶布

Inside liner: double-side coated silicone cloth

保温层: 玻璃纤维针刺毡

Insulation layer: fiberglass needled mat

外保护层: 双面涂层硅胶布

Protection layer: double-side coated silicone cloth

最高适用温度[Highest applicable temperature]: 250°C



四、可拆卸式保温套（新型高温型） New-type high temperature

产品编号[Product ID]: HLB IV

结构介绍[structure introduction]:

内衬层: 陶瓷棉纤维布

Inside layer: ceramic wool fiber cloth

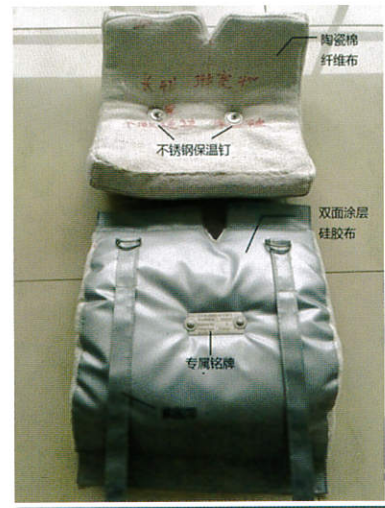
保温层: 陶瓷棉纤维毡

Insulation layer: ceramic wool fiber blanker

外保护层: 双面涂层硅胶布

Protection layer: double-side coated silicone cloth,

最高适用温度[Highest applicable temperature]: 650°C



五、可拆卸式保温套（新型超高温型） New-type super high temperature

产品编号[Product ID]: HLB V

结构介绍[structure introduction]:

内衬层: 高硅氧布

Inside liner high silica fabric cloth

保温层: 陶瓷棉纤维毡

Insulation layer: ceramic wool fiber blanket

外保护层: 双面涂层硅胶布

Protection layer: double-side coated silicone cloth

最高适用温度[Highest service temperature]: 1000°C



Flexible removable insulation cover-advantage

柔性可拆卸保温套—产品优势



Flexible removable insulation cover-application

柔性可拆卸保温套—应用领域



Flexible removable insulation cover-case study
(economic benefit)

柔性可拆卸保温套—案例分析（经济利益）

序号 Item	保温 工件 Insulated Parts	保温 面积 (m ²) Area	传统保温 Traditional Insulation				柔性保温 Flexible removable insulation				对比 (柔性保温-传统保温) Comparison	
			表面 温度 Surface Temp	热量流失 kwh/m ² /Year Heat loss	效益 /m ² /Year (RMB) Benefit	效益小计 (10K RMB) Benefit Amount	表面 温度 Surface Temp	热量流失 kwh/m ² /Year Heat loss	效益 /m ² /Year (RMB) Benefit	效益小计 (10K RMB) Benefit Amount	工作 总结能 kwh/年 Total Energy Conservation	工作 总效益 /年(RMB) Total enefit
1	一联合两台 烟机 Combined- cycle Flue Gas Expander	109	1344°C	6885	75730.5	825.5	76.7°C	5331	76526	834	169386	8.5
2	一联合两台 汽轮机 Combined- cycle Steam Turbine	107.5	103.7°C	4580	20376	219	54.9°C	2722	21327	229.2	199735	10.2
3	K5202 汽轮机 K5202 Turbine	102	76.1°C	2582	11749	12	49.9°C	2183	11924	12.2	68636	0.2
4	K201 汽轮机 K201 Turbine	12	101.6°C	4320	19727.5	23.7	54.2°C	2640	20587	24.7	20160	1
5	K101 汽轮机 K101 Turbine	11	89.4°C	3465	20947.5	23	54.9°C	2722	213327	23.4	8173	0.4
	合计 Total	249.7				1103.2				1123.5	404317.6	20.3

根据3E Plus软件核算出上述数据内容，我们可以看到以下信息：

- A、对比传统保温和我司的柔性可拆卸式保温，项目表面温度平均降低42.9°C。
- B、对比传统保温和我司的柔性可拆卸式保温，项目平均减少热量流失1302KWh/m²/年。
- C、对比传统保温和我司的柔性可拆卸式保温，项目燃烧成本平均降低763.26元/m²/年。
- D、此项目传统保温和我司的柔性可拆卸式保温相比，每年节能总量404317.6KWh，折算标准煤为163344kg，降低燃烧成本20.3万元。

According to the data of 3E Plus, we can see the following information:

A、Compared to traditional thermal insulation, our flexible removable insulation cover can help to reduce surface of the average temperate by 42.9 °C

B、Compared to traditional thermal insulation, our flexible removable insulation cover can help to reduce an average heat loss of 1302 KWH / m² per year

C、Compared to traditional thermal insulation, our flexible removable insulation cover can help to reduce an average burning cost RMB763.26 per m² per year

D、Compared to traditional thermal insulation, our flexible removable insulation cover can help to save annual total 04317.6KWh, converted to standard coal 163344kg, reduce burning coat 203,000RMB

传统保温 Traditional Insulation		柔性可拆卸式保温套 Removable insulation cover	
生产成本 Production cost		生产成本 Production cost	
初装成本 Initial installation cost	¥400,000	初装成本 Initial installation cost	¥1200,000
5年中重新保温的成本 Re-insulate cost during 5 years	¥3600,000	5年中重新保温的成本 Re-insulate cost during 5 years	¥60,000
5年大修总体拆卸、 重装的人工成本 Overall remove and installation cost in 5 years	¥2400,000	5年大修总体拆卸、 重装的人工成本 Overall remove and installation cost in 5 years	¥300,000
共计 Total amount	¥6400,000	共计 Total amount	¥1560,000
生产周期 Production perios		生产周期 Production perios	
每次检修时拆卸、重装所 耗费的工时（按2次/年） Man-hour while remove and reinstall (biannual)	3000hrs	每次检修时拆卸、重装所 耗费的工时（按2次/年） Man-hour while remove and reinstall (biannual)	500hrs
5年共计 Total	30000hrs	5年共计 Total	5000hrs

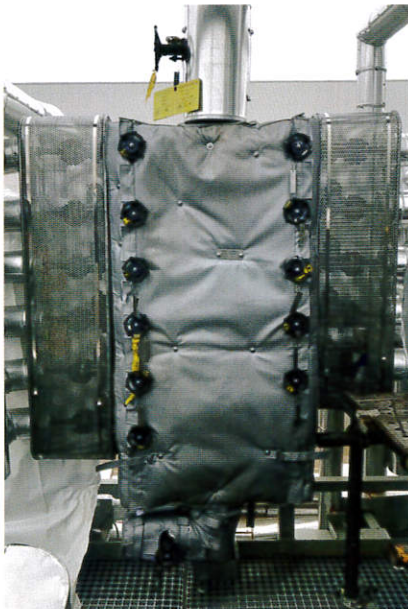


Flexible removable insulation cover-project performance



柔性可拆卸保温套— 工程业绩

(天然气领域 natural gas)



Flexible removable insulation cover-project performance

→ **柔性可拆卸保温套— 工程业绩**

(电力领域 power field)



Flexible removable insulation cover-project performance

→ **柔性可拆卸保温套— 工程业绩**

(海洋工程领域 oceaneering)



Flexible removable insulation cover-project performance



柔性可拆卸保温套— 工程业绩

(船舶工业领域 shipping industry)



Flexible removable insulation cover-project performance



柔性可拆卸保温套— 工程业绩

(石油化工领域 petrochemical engineering)



天津华利保温建材有限公司

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