Innovation

Leading the way to the future!

Changzhou Hammermill Machinery Technology Co.,Ltd

Tungsten Carbide HAMMER BLADE

HMT BRAND

Company Profile

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Changzhou Hammermill Machinery Technology Co., Ltd. (HMT) is a professional factory that produces crusher accessories. The factory was established in 2002, covers an area of 20000 square meters, and has 80 employees. The annual output value is 60 million yuan. Located in Liyang Economic and Technological Development Zone, with convenient transportation.

The company has its own R&D team, including 2 technical experts and 5 senior welding engineers, and has long-term cooperation with multiple welding research institutes at home and abroad. The company has developed a unique and leading tungsten carbide wear-resistant hammer blade based on leading hard alloy welding machine technology at home and abroad, through years of unremitting efforts and technological breakthroughs, and established its own HMT brand. Hammer blades have a long service life and high crushing efficiency, providing users with an unparalleled user experience.

The company adheres to green production and sustainable development, uses environmentally friendly materials, and achieves a wastewater recycling rate of 90%. With advanced international equipment, automated production lines, and ISO9000 certification system, strict quality inspection processes, we provide cost-effective customized solutions for global customers.

Main products: tungsten carbide welding hammers, tungsten carbide welding hammers, light plate hammers, roller shell,ring die,flat die, etc.

Customization capability: OEM/ODM service, supports personalized customization, and can be delivered within 7 days at the fastest.

After sales service: warranty commitment and support.

Honor certificate: awarded the title of 'City Quality Integrity Enterprise'.

Enterprise goal: To become a benchmark in the industry and lead technological innovation.

brand strategy

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Brand are an important component of intellectual property and an intangible asset of enterprises, embodying the wisdom and labor of producers and operators, and reflecting the business results of enterprises. The establishment of a brand means that our company has entered the path of branding and standardization development.

Roller shell brand

The brand combination is like the working state of a pressure roller. Another example is the cooperative relationship between factories and customers. Vividly and vividly illustrates that we are partners for win-win cooperation.

Hammer blade brand

The HMT brand is a combination of the letters Hammer Mill Technology, which vividly interprets the application of hard alloys in hammer blades. Reflects the characteristics of technological hammers and technical hammers.

HMT brand hammer blade

4 core products

1. Tungsten carbide overlay welding hammer blade

2. Tungsten carbide fusion welding hammer blade

3. Wear resistant smooth plate hammer blade

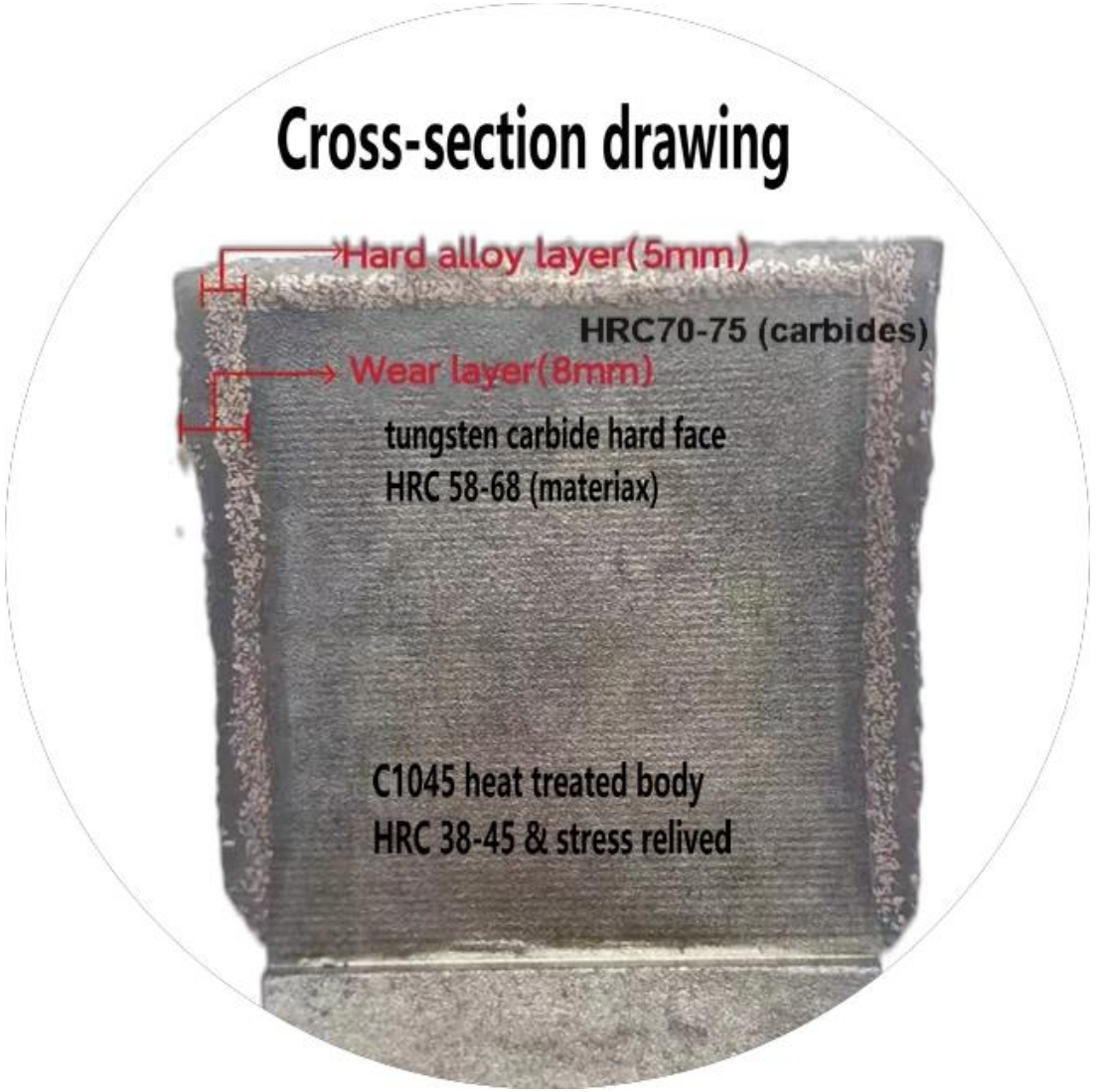
4. Plasma welding hammer blade (experimental testing stage)

HMT tungsten carbide overlay welding hammer blade

4 unique advantages:

1. Super wear-resistant

HMT tungsten carbide wear-resistant hammer blade. The service life is 3-4 times longer than other similar products, reducing the time for replacing hammer blades and saving costs.



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2. High crushing efficiency

HMT tungsten carbide wear-resistant hammer blade, during the use of the hammer blade, as the top wear-resistant layer gradually wears away, two sharp corners will form on the top and side of the hammer head. This greatly improves the crushing efficiency, enhances production efficiency, and saves electricity costs.

During the use of hammers from other companies, the top will wear into a circular arc shape, which reduces the crushing efficiency and increases power consumption.

3. The wear-resistant layer does not fall off

Adopting unique production technology, the tungsten carbide overlay is firmly bonded to the substrate. After repeated heavy hammer impact tests, it does not fall off and has excellent impact resistance.

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4. The body of hammer blade does not break

We can control the hardness of the substrate to be between 38-42 HRC, but the wear-resistant layer of the hammer head is between 60-62 HRC, and the hard alloy layer is between 72-75 HRC.

Hammer heads have high hardness and wear resistance.

The substrate is flexible, has strong impact resistance, and will not break.

Tungsten carbide overlay welding hammer blade

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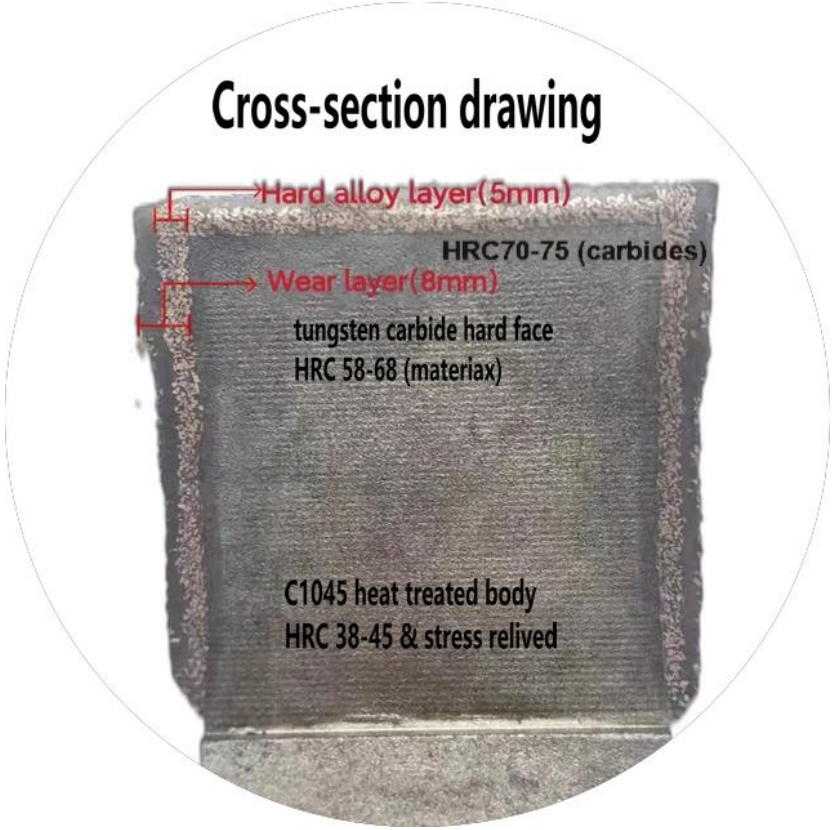
(Single layer overlay welding and double layer overlay welding)

The tungsten carbide hammer blade welding process is a technology that uses tungsten carbide (WC) hard alloy particles combined with welding wire to form a wear-resistant layer on the surface of the workpiece through automated equipment. Tungsten carbide has become the preferred welding material due to its excellent hardness and wear resistance.



Technical features:

1. Shape: Single headed single hole type, double headed double hole type

2. Size: Various sizes, customizable

3. Material: High quality wear-resistant steel,

wear-resistant welding wire, tungsten carbide particles

4. Hardness:

Tungsten carbide layer: HRC70-75

Wear resistant layer: Hardface overlay - HRC 58-63

Hammer body: HRC 38-45 and stress relief

Surrounding the hole: HRC38-45 (hardness can be customized according to customer requirements)

Single layer overlay welding hammer blade

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The height of the tungsten carbide layer reaches 4mm-5mm, and the total wear-resistant height reaches 6mm-8mm. Its service life is 3-4 times that of similar products. Save crushing costs and reduce replacement time.

Double layer overlay welding hammer blade

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The height of the tungsten carbide layer reaches 6mm-8mm, and the total wear-resistant height reaches 10mm-12mm, which has unparalleled advantages。

Different types of tungsten carbide overlay welding hammer blade

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1. Ordinary type - one end welded

2. Double headed - used twice, saving costs

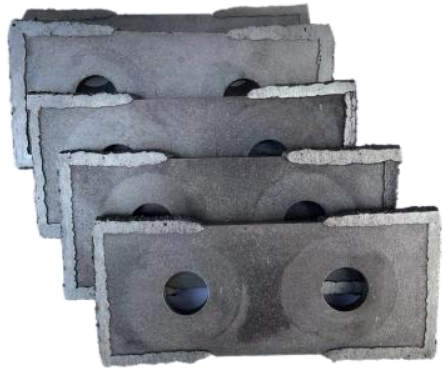
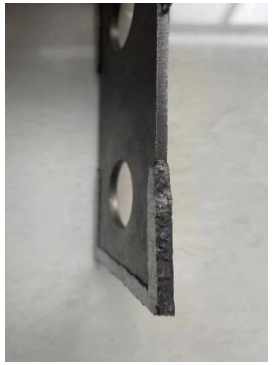
3. Side extension - the length of the welding layer on both sides is extended to 90mm

4. Shear type - After polishing the welding layer, a cutting edge is formed, which has good shear performance

5. Ultra thin - can weld the thinnest hammer piece, with a substrate thickness of only 3MM

6. Double layer - Double layer welding technology with dual wear resistance



Welding layer firmness and impact resistance testing

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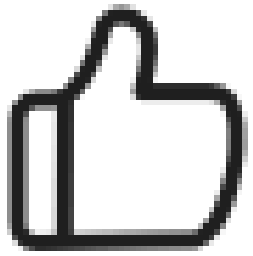
Testing is a key test to ensure the safety and reliability of welded structures, covering impact strength, fracture toughness, fatigue life, and microstructure analysis, using professional methods such as pendulum impact and drop hammer impact.

Testing usually includes the following aspects:

test item



- **Impact strength test:** measure the maximum load-bearing capacity of the weld layer under impact load.
- **Fracture toughness testing:** Evaluating the fracture behavior of the weld layer under impact loading.
- **Fatigue life test:** Simulate the durability of the weld layer under multiple impact loads.
- **Microstructure analysis:** Observe the microstructural changes of the weld layer after impact using a metallographic microscope or electron microscope.

Welding layer
firmness and impact resistance testing

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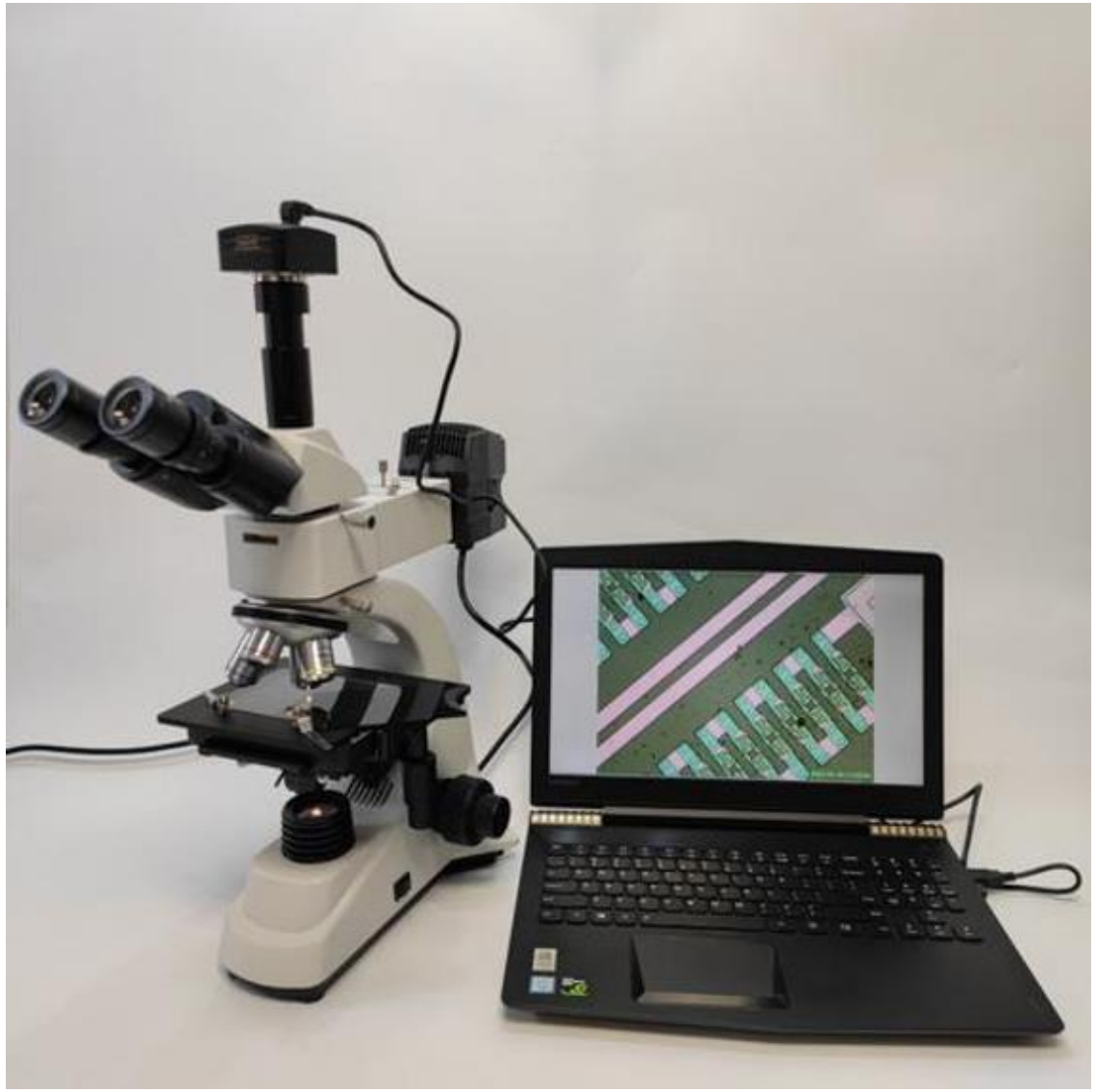
test method

Drop hammer impact test: Use the drop hammer impact test to simulate actual impact conditions and evaluate the firmness and impact resistance of the weld layer.

test equipment

Metallographic microscope: Observe the microstructural changes of the welded layer after impact.

Electron microscope (SEM): used for high-resolution observation of the fracture surface morphology of solder joints.



Test date

HMT HAMMER BLADE
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Cel: +(519) 87 386644
Mail: michael@hammtech.com

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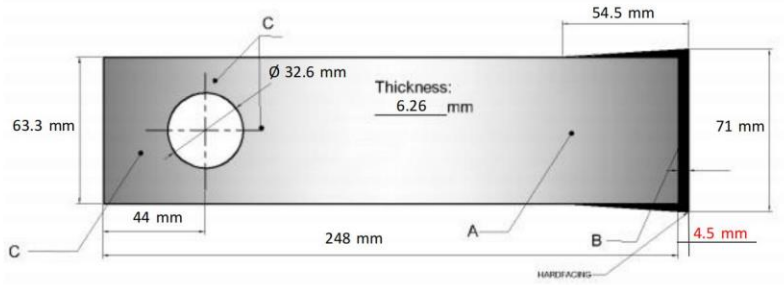
21/05/2025

HMT HAMMER SPECIFICATIONS

Representation of interest areas:



Zone A: Body **Zone B**: Impact zone **Zone C**: Eyelet

REFERENCE VALUES

REFERENCE	Zone A(Body)	Zone B(Impact)	Zone C(Eyelet)	Weight (kg)	Thickness
	38/45 HRC	70/75 HRC	38/45 HRC	0.76	6.26mm / (1/4)"

Weight: 760 g

- It is important to maintain the hardness in the body.

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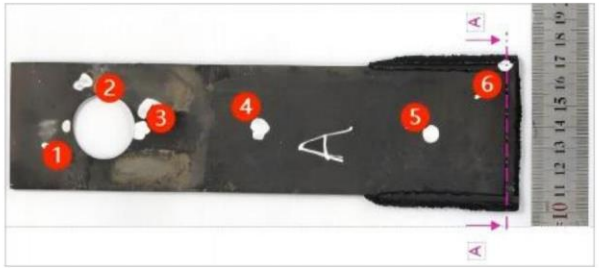
HMT HAMMERS LABORATORY TEST

Rockwell Test

METHOD: Microhardness: ISO 6507-1 was taken as reference. Hardness: IRAM-IAS-NM-ISO 6508-1 and IRAM-IAS-NM-ISO 6506-1 were taken as reference.

EQUIPMENT: Bei JingTIME High Technology Ltd. Bench Durometer: 22SSHV304013.

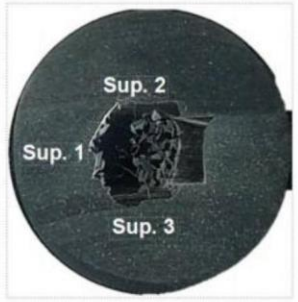


Results	
Point #	HRC
1	35
2	36
3	36
4	42
5	44

Note: Due to the characteristics of the area where Point #6 is located (hard recharge zone), transverse cuts will be made on the sample axes and micrograph test specimens were prepared in order to make determinations on a plane containing the zone of interest.

Vickers Microhardness Test

Micrographic probe taken in section A-A



Results			
Point #	Sup.	Vickers	HRC
6	Sup. 1	1412.2	(*)
		1328.3	(*)
	Sup. 2	748.7	63.1
		709.5	62.5
	Sup. 3	597.5	59.1
		574.1	58.8

(*) Rockwell off-scale values

Welding layer firmness and impact resistance testing (video)

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Single layer overlay welding hammer blade

double layer overlay welding hammer blade

Tungsten carbide fusion welding hammer blade

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Technical features:

1. Shape: Single headed single hole type, double headed double hole type
2. Size: Various sizes, customizable
3. Material: High quality wear-resistant steel, tungsten carbide particles
4. Hardness:
Tungsten carbide layer: HRC70-75
Hammer body: HRC 55-60 and stress relief
Surrounding the hole: HRC38-45
(Hardness can be customized according to customer requirements)

Tungsten carbide fusion welding hammer blade

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Technical features:

5. The particles melt directly with the matrix. Other similar products on the market can only be used for welding material overlay.

6. It has high wear resistance, high hardness, and high impact resistance. Other similar products on the market cannot have all three at the same time.

Wear resistant smooth plate hammer blade

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Technical features:

1. High quality wear-resistant steel

2. Special heat treatment process to form a dense and high hardness wear-resistant layer on the hammer blade head part

3. Hardness: HRC30-40 around the hole, HRC60-63 for the hammer blade head, special sharp angle design to increase wear angle and thickness; The wear-resistant layer reaches 6mm-8mm, making it an economically efficient product.

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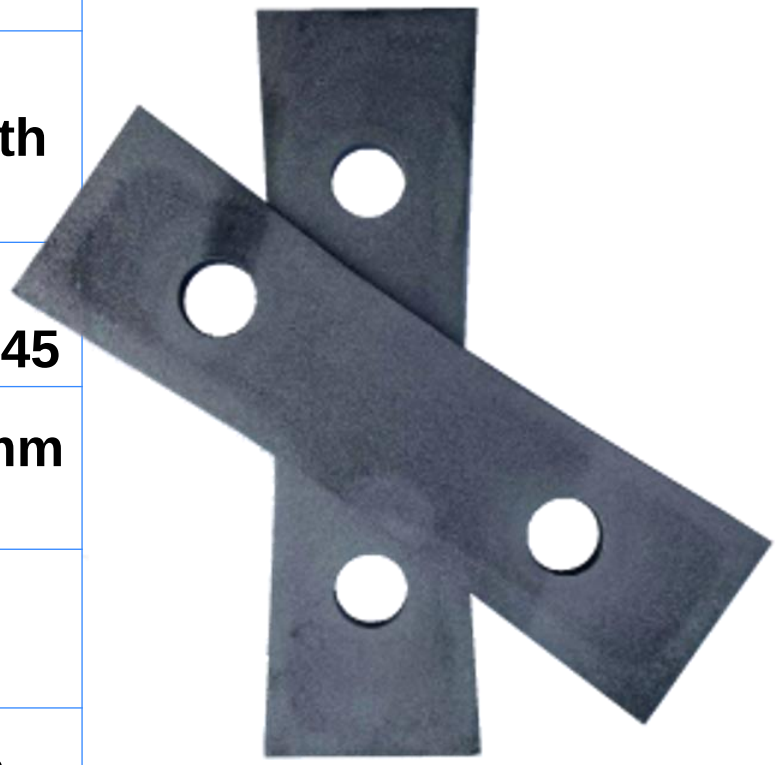
HMT hammer blade PK market hammer blade

HMT hammer blade	market hammer blade
The organization is dense and the particle size reaches level 6	The organization is coarse, with a granularity of 3-4 levels
The surface hardness of the hammer body reaches HRC60-63	The surface hardness of the hammer body reaches HRC40-45
Hardness layer depth: 6mm-8mm	Hardness layer depth: 1mm-2mm
Hardness layer width: 12mm to 15mm	Hardness layer width: 5mm to 6mm
Special sharp corner design	Without sharp corner design



Tungsten carbide has a very high hardness and strong wear resistance, so it has been widely used in various industrial productions.

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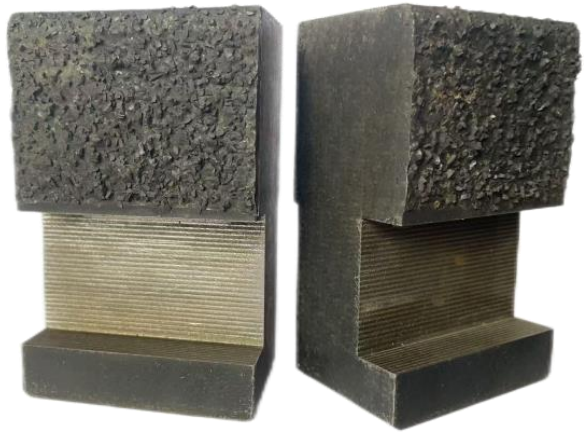
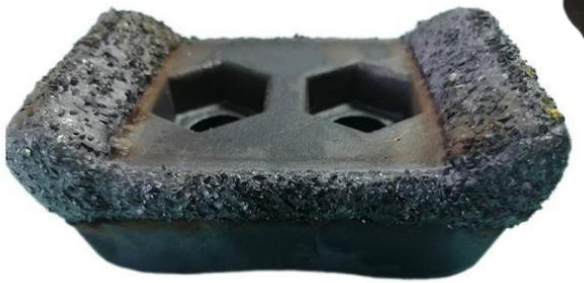
Application of HMT's R&D technology in other wear-resistant parts

1. Different wear-resistant spare parts





2.Tungsten carbide roller shell

3.Finished hammer blade

4. IS9001 Quality Management System Certification, HMT Hammer Patent Certificate, HMT Brand Certificate

INTERNATIONAL MANAGEMENT SYSTEM CERTIFICATION GROUP

质量管理体系认证证书

兹证明

溧阳市国光机械有限公司

统一社会信用代码：91320481672524018I

注册地址：中国江苏省溧阳市溧城镇北门东路 68 号

审核地址：中国江苏省溧阳市溧城镇北门东路 68 号

建立的管理体系经审核符合以下标准要求：

GB/T19001-2016/ISO9001:2015

认证范围

饲料机械配件、粉碎机配件的加工（资质许可除外）

证书编号：IMSCG25Q12736R0S

发证日期：15/04/2025 有效期至：14/04/2028

注：组织须按规定接受每年监督审核，并遵守相关认证规定，认证证书有效性才能保持有效。
认证注册范围不包括未获得有效的国家规定的相关行政许可，资质许可和 3C 认证的产品服务范围。

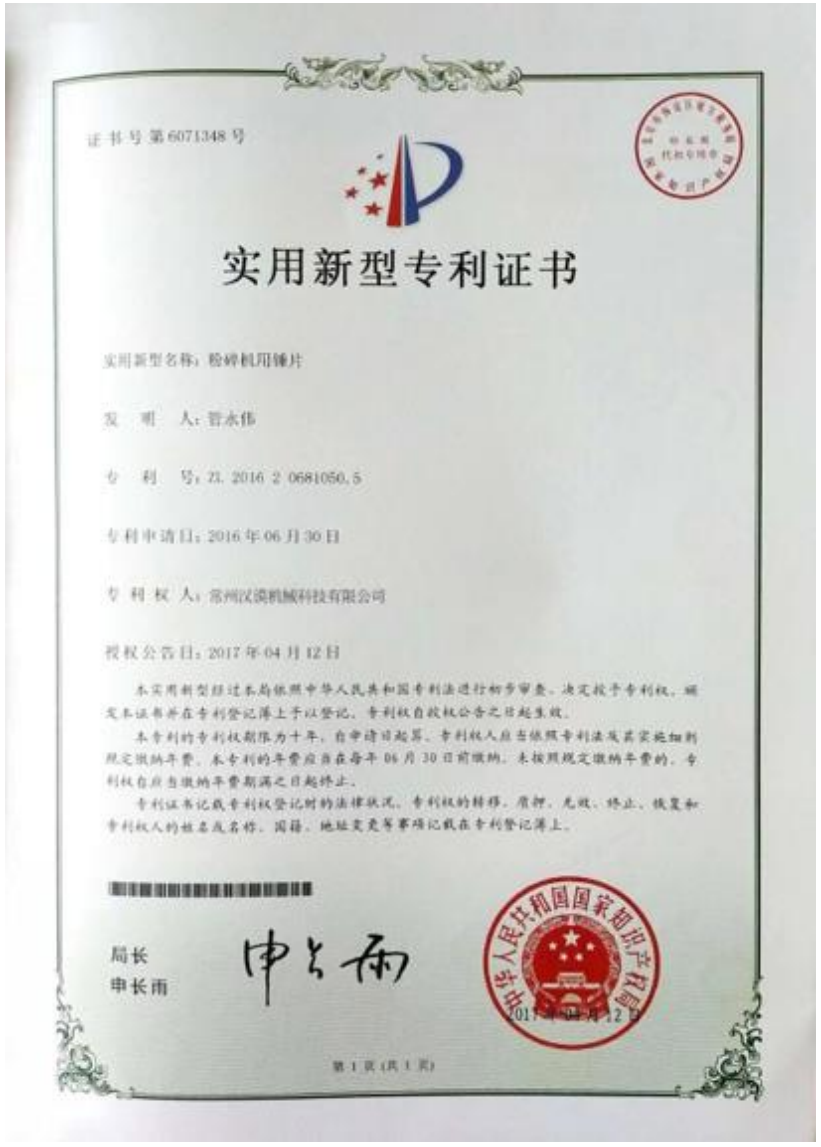
证书签发人：

总经理

第一次年监（贴标有效） 第二次年监（贴标有效） 第三次年监（贴标有效）

注：按照认证要求，每次监督审核时间与上次现场审核时间间隔不得超过 12 个月。

依曼斯认证（上海）有限公司 电话：021-38755218 传真：021-38755218
地址：中国（上海）自由贸易试验区钱仓路 1 号 19A 室
证书有效性查询方式：依曼斯认证（上海）有限公司网站 http://www.imscertgroup.com/；
国家认证认可监督管理委员会网站 www.cnca.gov.cn



证书号第6071348号

实用新型专利证书

实用新型名称：粉碎机用锤片

发明人：管永伟

专利号：ZL 2016 2 0681050.5

专利申请日：2016年06月30日

专利权人：常州汉谟机械科技有限公司

授权公告日：2017年04月12日

本实用新型经过本局依照中华人民共和国专利法进行初步审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为十年，自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费。本专利的年费应当在每年06月30日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

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局长
申长雨

第1页(共1页)

TMZC82387603D01T250712

第 82387603 号

商标注册证

核定使用商品/服务项目（国际分类：7）

第7类：锤（机器部件）；破碎锤；刀片（机器部件）；刀（机器部件）；金属加工机械用刀头；饲料粉碎机；青饲料切割机；饲料压碎机（饲料磨碎机）；粉碎机；工业用切碎机（机器）（截止）

注 册 人 常州汉谟机械科技有限公司

注册人地址 江苏省溧阳市埭头镇渡头街8-2号1幢

注册日期 2025年06月21日 有效期至 2035年06月20日

局 长

发证机关

Feedback information on the use of tungsten carbide hammer blades

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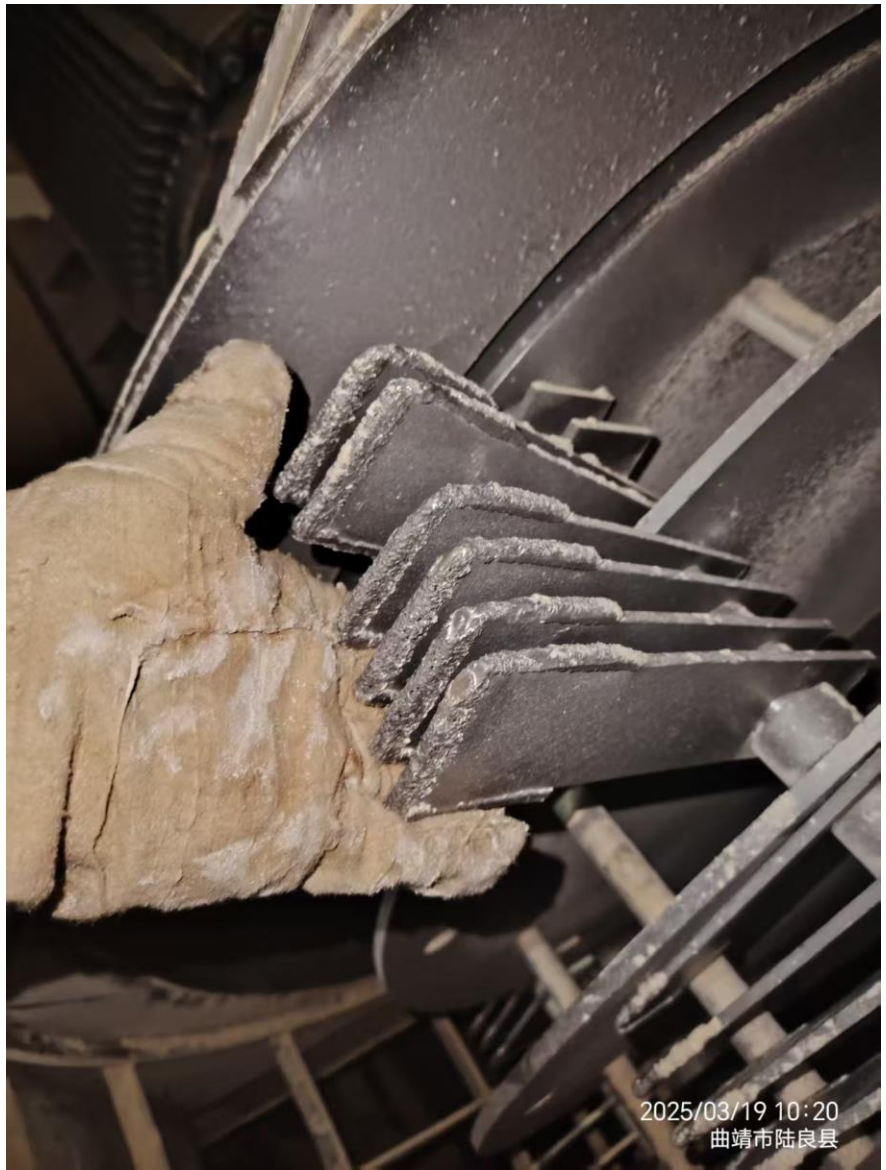
Case 1:

Binhai Wenshi, model: Muyang 66 * 100C, hammer blade size 175 * 50 * 5, this set of hammer blades has a service life of 3 months, with a cumulative crushing weight of 6239673.421kg of corn, combined with a 1.5mm aperture sieve. Under the same conditions, the service life of hammer blades in other factories is one month.



Feedback information on the use of tungsten carbide hammer blades

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Case 2:

Lianyungang Wenshi, model:Muyang 66 * 100C, hammer size: 175 * 50 * 5; The hammer set was installed on May 12, 2022 and replaced on November 7, 2022, with a total of 18560.23 tons of crushed raw materials. Under the same conditions, the hammer production of other factories is 8500 tons, and the HAMMTECH hammer has twice its lifespan.

Product structure features: high efficiency, ultra long service life, reduced replacement frequency, and reduced labor intensity.

Feedback information on the use of tungsten carbide hammer blades

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Case 3:

Feedback on the use of hammer blades in Hebei; The usage data of a set of 72 hammer pieces proves that its production capacity is more than three times that of the original hammer piece.

Feedback information on the use of tungsten carbide hammer blades

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The factory replaced HAMMTECH's hammer blades, with a total output of approximately 25886 tons. The above figure shows the hammer state after use. The direction has not been adjusted yet, and the other side of the hammer is still relatively intact. Backward adjustment can continue to be used for a long time.

The number of hammer pieces is 72, the size of hammer pieces is 245 * 60 * 6, the sieve aperture is 3.0MM, and the crushing material is 50% corn, 20% brown rice, and a small amount of peanut meal.

Feedback information on the use of tungsten carbide hammer blades

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Case 4:

Feedback on the use in Mianyang, Sichuan; The usage data of a set of 128 hammer pieces proves that its production capacity is 3.5 times that of the original hammer piece. We have saved costs and time for customers to replace hammer blades.

Feedback information on the use of tungsten carbide hammer blades

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锤片产量登记表

序号	月/日	工厂	车间	粉碎机型号	[illegible]	锤片数量	原料品种	当日产量	累计产量	当班记录人	核实人	备注
25	7月3日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	160	2879	[illegible]顺	潘[illegible]弟	
26	7月3日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	123	3002	[illegible]东	[illegible]	
27	7月4日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	85	3087		[illegible]	
28	7月4日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	211	3298	[illegible]		
29	7月5日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	110	3408	[illegible]		
30	7月5日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	206	3614	[illegible]顺	[illegible]	
31	7月6日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	30	3644	[illegible]东	[illegible]	
32	7月6日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	189	3833	[illegible]		
33	7月7日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	120	3953	[illegible]		
34	7月7日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	131	4084	[illegible]天		
35	7月8日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	0	4084	[illegible]		
36	7月8日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	213	4297	[illegible]		
37	7月9日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	70	4367	[illegible]		
38	7月9日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	157	4524	[illegible]		
39	7月10日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米		4524			转班
40	7月10日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	321	4845	[illegible]	[illegible]	
41	7月11日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	177	5022	[illegible]顺	[illegible]	
42	7月11日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	253	5275	[illegible]东	[illegible]	
43	7月12日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	185	5460	[illegible]顺	[illegible]弟	
44	7月12日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	356	5816	[illegible]东	[illegible]	
45	7月13日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	133	5949	[illegible]顺	[illegible]弟	
46	7月13日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	130	6079	[illegible]东	[illegible]波	
47	7月14日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	181	6260	[illegible]顺	[illegible]弟	
48	7月14日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	210	6470	[illegible]东	[illegible]波	
49	7月15日（白班）	绵阳工厂	一车间	315		128片	高粱+玉米	137	6607	[illegible]顺	[illegible]弟	
50	7月15日（夜班）	绵阳工厂	一车间	315		128片	高粱+玉米	180	6787	[illegible]东	[illegible]	

The above chart shows the daily and total production of HAMMTECH hammer blades from July 3rd to July 15th. As of July 15th, the total production has reached 6787 tons.

Feedback information on the use of tungsten carbide hammer blades

Innovation
Leading the way to the future!

The left graph shows the hammer state after the total production has reached 6787 tons. The wear of hammer blades is minimal

The final data used proves that its production capacity is 3.5 times that of the original hammer blade. We have saved costs and time for customers to replace hammer blades.

Feedback information on the use of tungsten carbide hammer blades

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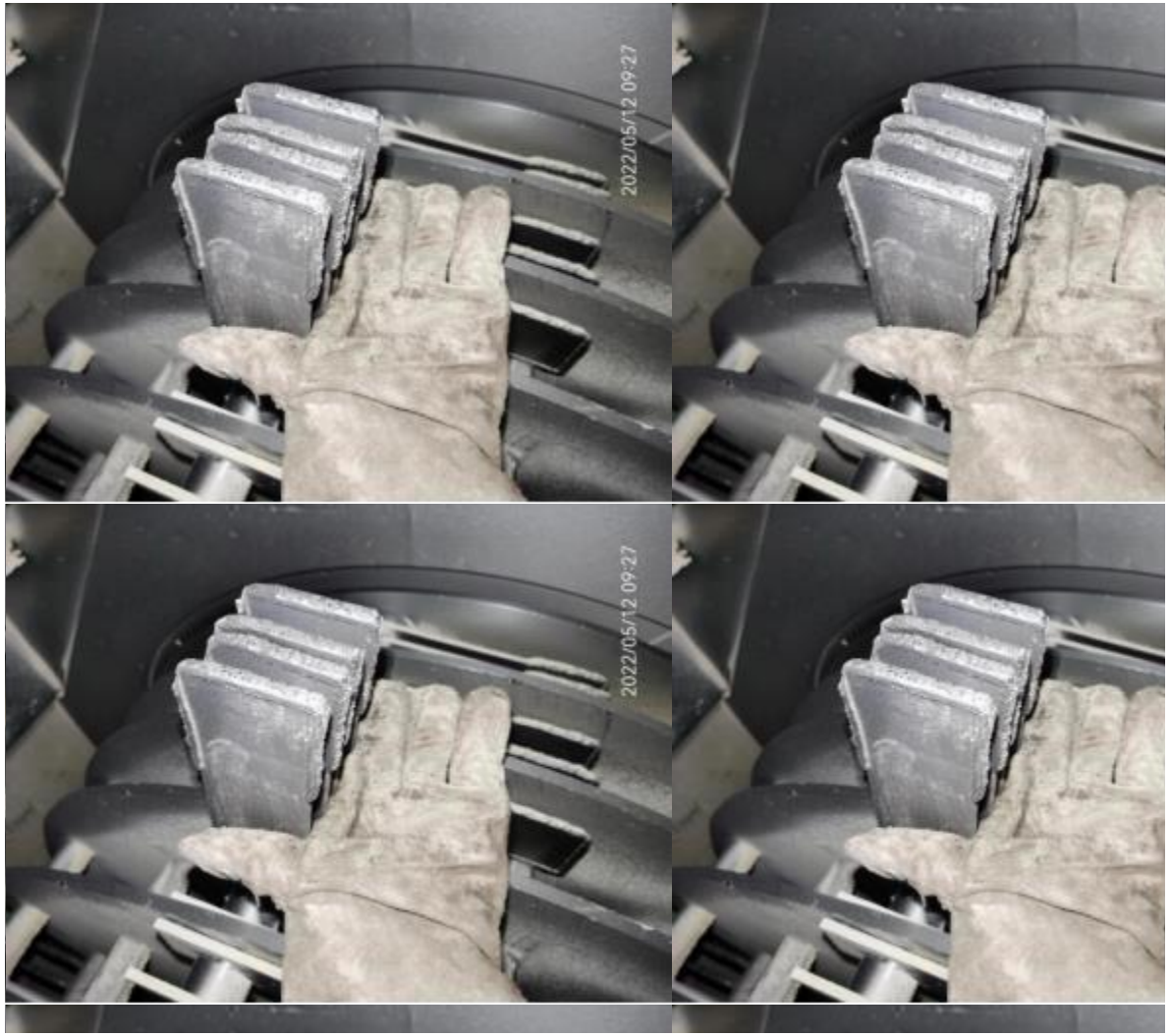
Case 5:

Feedback on the use in Chongqing; The usage data of a set of 64 hammer pieces proves that their production capacity is three times that of the original hammer piece. The cost of using a hammer for 2 million tons of feed can save 190000 yuan compared to the cost of using the customer's original hammer. At the same time, it saves customers the time to replace hammer blades.



Feedback information on the use of tungsten carbide hammer blades

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This is the replacement of HAMMTECH's hammer blades by the factory on April 11th, and the total production by May 12th is approximately 4500 tons. The above figure shows the hammer state after use. The wear of the hammer blade is minimal.

The crushing machine is 968-3, with 64 hammer pieces and a hammer size of 245 * 62 * 6. The sieve aperture is 2.5mm, and the crushing material is corn.

The hammer blades originally used in the factory were approximately crushed to 6000 tons and replaced. That is 6000/64=93 tons, which is the normal service life of domestic hammer blades. Basically 70-100 tons per piece.

Feedback information on the use of tungsten carbide hammer blades

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The above picture shows the state of HAMMTECH's hammer blades after 3 months and 10 days of use, and the overall hammer blade head is still relatively intact. With a monthly production of 4500 tons and a total production of 15000 tons in 3 months and 10 days, it is not a problem to continue using 18000 tons. Compared to the production capacity of 6000 tons of similar products, the service life of HAMMTECH's hammer blades is three times longer.

case 6：

瑞金双胞胎耐磨锤片性能测试

粉碎锤片电耗：

1.粉碎锤片使用周期73天，主原料为：玉米，玉米总用量25061吨，耐磨测试锤片实际粉碎产量22321吨，

2.耐磨锤片使用期间电耗：172490度，吨电耗7.7度/吨，同比下降0.8度/吨，费用节省：7580元

锤片使用情况：

1.粉碎效率同比提升8%，吨电耗同比下降0.8度/吨

2.生产技师未定期换向，锤片刀口未充分使用

3.粉碎锤片磨损均匀，

改善措施：

1.减短有效耐磨锤片刀口长度3-5MM同时增加耐磨锤片刀口厚度3-5MM

二个月数据对比

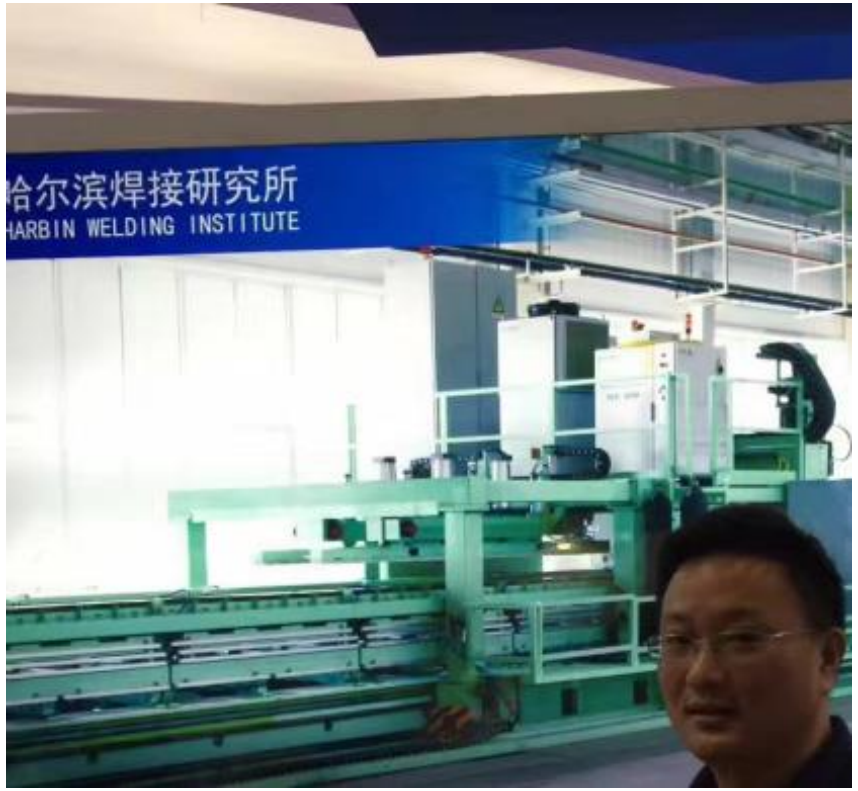
日期	编号	初始电表	末期电表	用电量	产量（T）	吨电耗
7.3日-9.3日	普通	5439828	5554700	114872	13537	8.5
9.3日-11.3日	特制	5554700	5682538	127838	16602	7.7

二个月磨损对比

磨损度

Exhibition

We participated in the Beijing Welding Exhibition and were allowed to showcase our products at the Harbin Welding Research Institute.



We participated in the Toronto Mining Machinery Exhibition and exchanged wear-resistant technology with international clients.

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Thank you!