



Qingdao Hexin Machinery Co.,Ltd.

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QINGDAO HEXIN MACHINERY CO.,LTD.

WHO WE ARE

Qingdao Hexin Machinery Co.,Ltd.

Qingdao Hexin Machinery Co.,Ltd. is located in Qingdao, a famous tourist resort and coastal open city in China. It is a professional foundry specialized in the production of high-temperature alloy castings, centrifugal cast tubes, heat resistant alloy static castings for furnace spares and fixtures. It is a member of China National Petroleum Corporation and one of the top listed suppliers of high-temperature alloy parts for China's metallurgical industry.

20⁺ years
production experience

360000⁺
square meters
Our factory

200⁺ people
employees

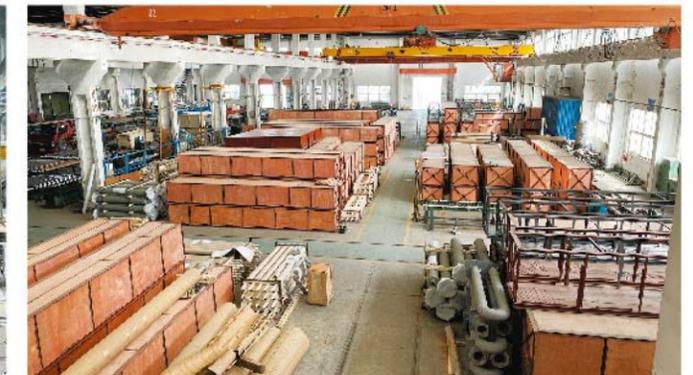
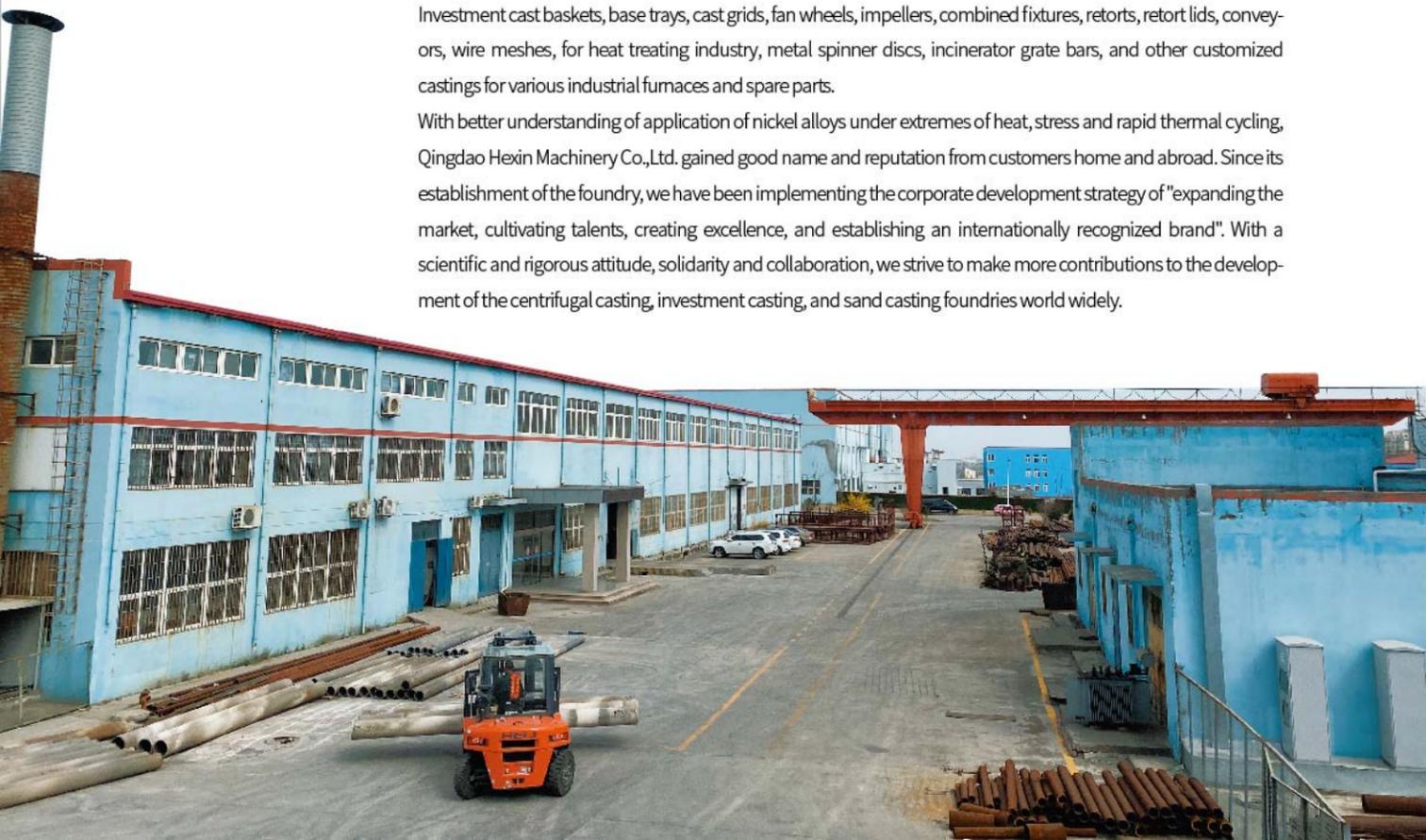
The total investment for the foundry is more than 60 million yuan, and the plant area is about 360,000 square meters. At present, there are more than 200 employees, among which 68 are various kinds of technical personnel and engineers. Our foundry has modern manufacturing facilities including centrifugal casting production lines for producing nickel chrome cast tubes from OD.55 to OD.1600mm, sand casting lines for producing single piece casting up to 6000kgs, lost wax investment casting lines to complicated shape parts Length 1400mm*1000mm*300mm, plasma cutting, flux free argon arc welding, hydraulic press, PT, RT, UT, and other NDT test facilities, etc.,

Qingdao Hexin Machinery Co.,Ltd. designs and manufactures nickel chrome alloy spares and fixtures for various heat treatment furnaces such as sealed quench, fluidised bed, pit type gas carburising, shaker hearth, rotary, muffle, vacuum, walking beam, salt bath, bell type furnace, etc.,

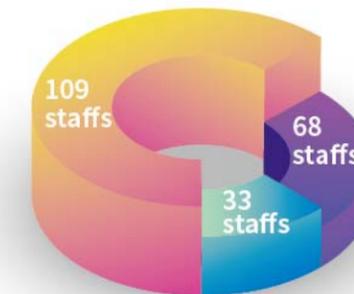
Regular casting products like various kinds of furnace tubes, reformer tubes, ethylene crack tubes, radiant tubes, furnace rollers, cast pipe fittings, cast tube sheets, supports, hangers, and brackets for petrochemical fired heaters. Sink roll, stabilizing roll, arms, snouts, sleeves and bushings for zinc bath and galvanizing line. Wet rolls and dry rolls for tunnel furnaces, rolls for heavy plate heat treatment furnaces, charging and discharging rolls, cobalt alloy riders, walking beam castings, heat recuperators, heating elements, etc.,

Investment cast baskets, base trays, cast grids, fan wheels, impellers, combined fixtures, retorts, retort lids, conveyors, wire meshes, for heat treating industry, metal spinner discs, incinerator grate bars, and other customized castings for various industrial furnaces and spare parts.

With better understanding of application of nickel alloys under extremes of heat, stress and rapid thermal cycling, Qingdao Hexin Machinery Co.,Ltd. gained good name and reputation from customers home and abroad. Since its establishment of the foundry, we have been implementing the corporate development strategy of "expanding the market, cultivating talents, creating excellence, and establishing an internationally recognized brand". With a scientific and rigorous attitude, solidarity and collaboration, we strive to make more contributions to the development of the centrifugal casting, investment casting, and sand casting foundries world widely.



ORGANIZATIONAL CHART

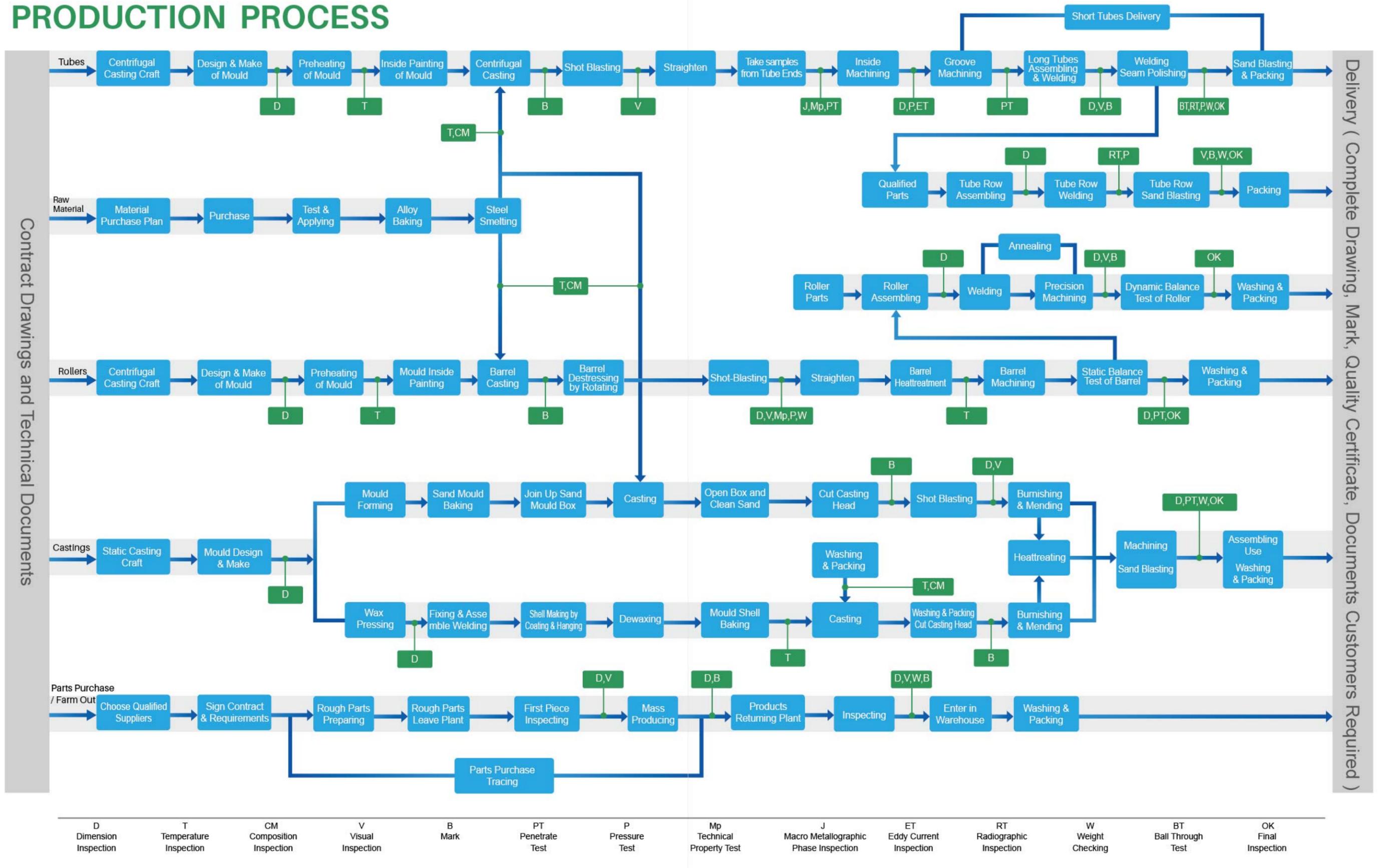


- 210 staffs in total
- 68 technical engineers
- 33 management personnel
- 109 production workers

CERTIFICATION



PRODUCTION PROCESS



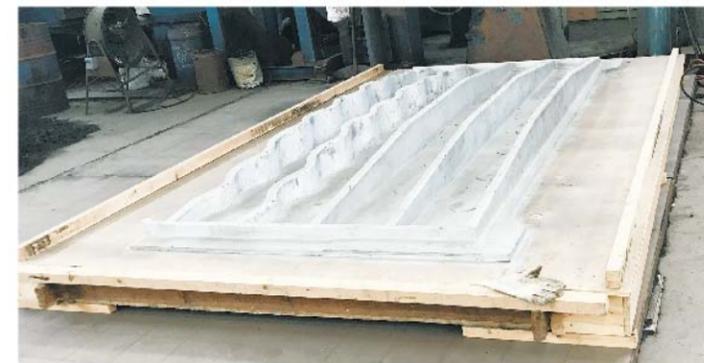
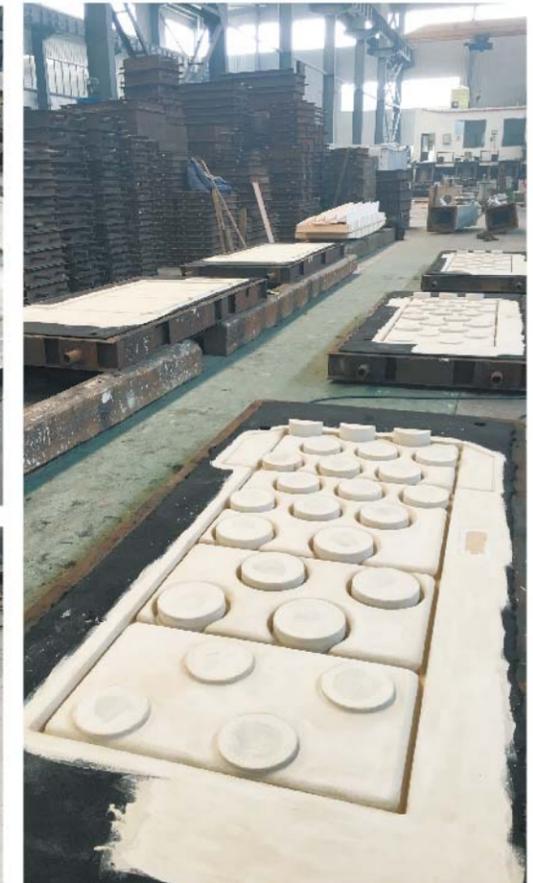
PRODUCTION EQUIPMENTS

Our production facilities are professionally equipped for Sand casting, Investment casting, Centrifugal casting, Machining, Welding, and Quality control.



INVESTMENT CASTING

SAND CASTING





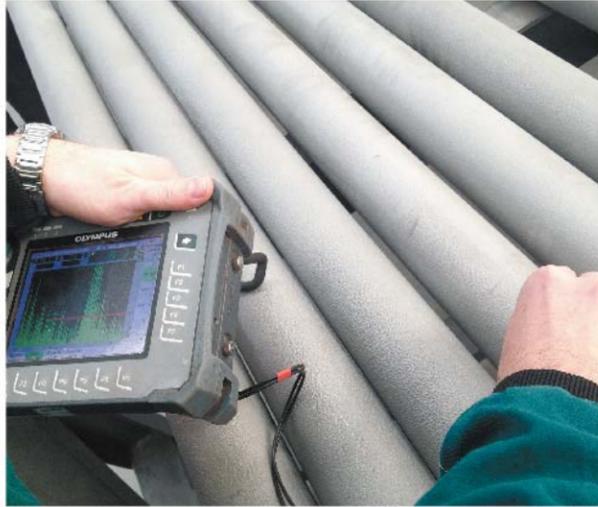
**CENTRIFUGAL CASTING
WELDING
MACHINING**



INSPECTION EQUIPMENTS

Our laboratories are well equipped with advanced test machines, like Spectrometer, Chemical analysis instruments, PMI test, Tensile test machines for room temperature, high temperature, short time and long time;





Metallographic controls, X-Ray (Radiography RT), PT Liquid penetrant test, ET Eddy current, UT Ultrasonic test, Pressure test, Hardness test, Roughness test, etc.



Spun cast tubes and assemblies like Reformer tubes, Ethylene cracking coils , Manifolds, pigtail tubes, bent tubes, transfer-lines, etc.



Static castings like Tube sheets, tube support brackets, tube hangers, bends, elbows, wye pieces, plug headers, reducers, etc.



METALLURGICAL INDUSTRY



Radiant tubes by spun casting and welding method, in various configurations like I, U, W, P, double P. Electric radiant tube with special alloy FeCrAl is one of our patented products, and by spiral welding method.





Centrifugal cast Furnace rolls, water cooled or dry rolls, diameter up to 1500mm, Rolls for CSP plants, Sink and stabilizing rolls, Sleeves and bushings, Arms, Snouts for galvanizing lines.



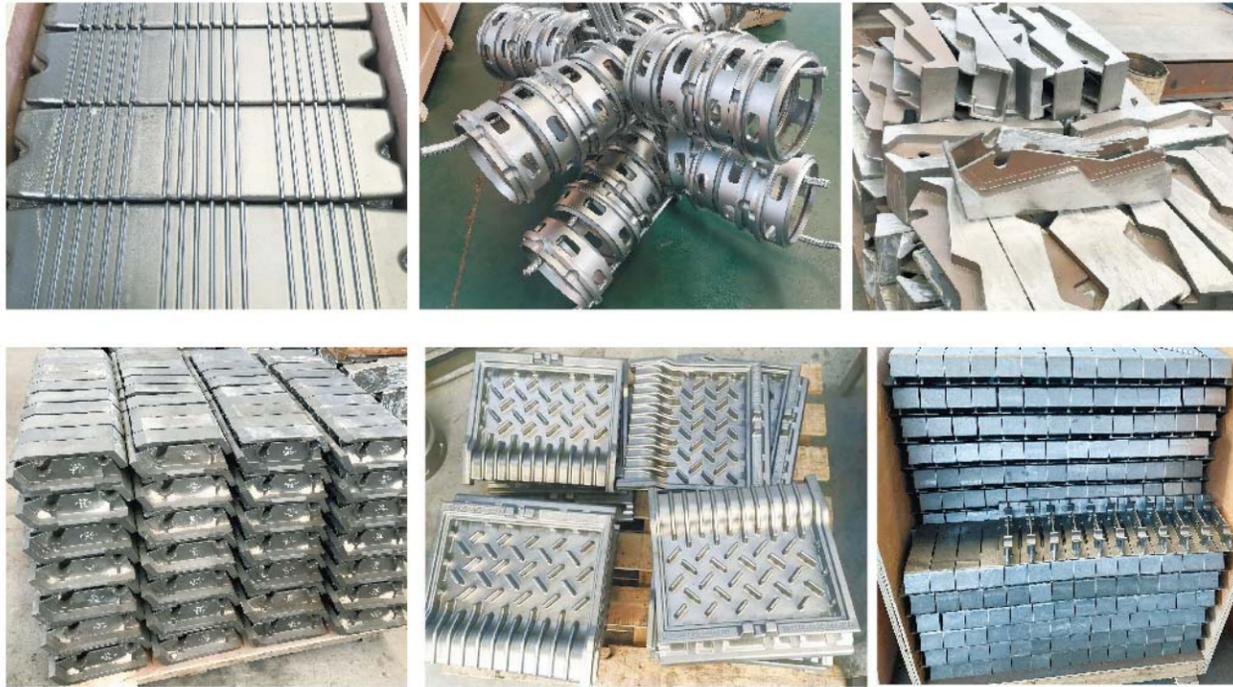


Cast base trays, stackable baskets, fixtures, fan wheels, loading fixtures for pit furnaces, cast link belt and drive drum, rotary retort with internal spirals, intermediate grid, reduction boat, pusher head, cast guide, wire mesh belt, cross beam, etc.



OTHERS





Various grate bars for incineration plants, like air cooled incinerator grates, water cooled incinerator grate bars, front panels, side wall, guide beams, combustion grates, etc.
 Metal spinner discs for glasswool production, normally we use our special materials in cobalt based alloy and nickel based alloy, so that the stable service life be guaranteed.



PACKING



CHEMICAL COMPOSITION OF SOME ALLOYS

No.	Grade	Chemical Composition												Equivalent Foreign Grade	
		C	Si	Mn	S	P	Cr	Ni	Mo	Nb	W	Ti	Co		Others
1	HXA24-7N(Re)	0.30 0.40	1.30 2.00	0.80 1.50	≤ 0.03	≤ 0.03	23.0 26.0	7.0 9.0						N.Re 0.3	
2	HXA18-8	0.06 0.12	0.60 1.50	0.80 2.00	≤ 0.03	≤ 0.03	17.0 20.0	8.0 11.0			0.5 0.7			304H、1.4308	
3	HXA18-12-Mo2	0.06 0.10	0.60 1.50	0.80 1.50	≤ 0.03	≤ 0.03	17.0 20.0	10.0 13.0	2.00 3.00					TP316H、1.4437	
4	HXA-20-10	0.25 0.35	0.80 2.00	0.60 1.50	≤ 0.03	≤ 0.03	19.0 23.0	9.0 12.0	≤ 0.50					HF、SCH12、1.4826	
5	HXA22-14-Mo	0.30 0.50	0.80 1.40	0.80 1.40	≤ 0.03	≤ 0.03	21.0 23.0	13.0 15.0	1.0 2.0					1.4832、SCH13	
6	HXA25-20	0.30 0.50	0.60 1.75	0.60 1.50	≤ 0.03	≤ 0.03	23.0 27.0	19.0 22.0	≤ 0.50					HK40、1.4848、SCH22	
7	HXA20-32NbM	0.10 0.20	0.60 1.25	0.60 1.50	≤ 0.03	≤ 0.03	19.0 23.0	30.0 35.0	≤ 0.50	1.0 1.8			Micro	Incoloy800H、1.4859	
8	HXA25-35NbM	0.30 0.60	0.60 2.00	0.60 2.00	≤ 0.03	≤ 0.03	24.0 27.0	33.0 37.0	≤ 0.50	0.6 1.50			Micro	HP-Nb、XM、1.4852	
9	HXA26-36-W5Co15M	0.30 0.60	0.70 1.60	0.10 0.70	≤ 0.03	≤ 0.03	24.0 27.0	34.0 37.0	≤ 0.50		4.0 6.0	13.0 17.0	Micro	KHR35W、TAH33	
10	HXA35-45NbM	0.30 0.60	≤ 2.00	≤ 2.00	≤ 0.02	≤ 0.02	35.0 37.0	43.0 48.0	≤ 0.50	0.8 1.5			Micro	XTM、KHR45A	
11	HXA28-48-W5M	0.30 0.60	0.80 2.00	0.60 1.50	≤ 0.03	≤ 0.03	27.0 30.0	47.0 50.0			4.0 6.0		Micro	KHR48N、NA22H	
12	HXA27-37-W	0.30 0.60	≤ 1.50	≤ 1.30	≤ 0.03	≤ 0.03	25.0 28.0	35.0 38.0	≤ 0.50		1.00 2.00			SCH24、MoRE-1	
13	HXA34-50-W15	≤ 0.50	≤ 0.50	≤ 0.50	≤ 0.03	≤ 0.03	32.0 36.0	48.0 52.0	≤ 0.50		14.0 17.0			MoRE-2、TAH39	
14	HXA20-60-Mo2	0.25 0.35	≤ 1.40	≤ 1.40	≤ 0.03	≤ 0.03	19.0 22.0	59.0 61.0	2.00 3.00						
15	HXA25-58-M	0.30 0.50	≤ 1.50	≤ 1.50	≤ 0.03	≤ 0.03	28.0 30.0	58.0 60.0					Micro	Incoloy690	
16	HXACo-20	0.30 0.50	≤ 1.50	≤ 2.00	≤ 0.02	≤ 0.02	27.0 30.0	18.0 22.0		1.0 3.0	3.0 5.0	18.0 20.0			
17	HXACo-40	≤ 0.20	≤ 2.00	≤ 2.00	≤ 0.02	≤ 0.02	25.0 29.0	15.0 19.0	0.60 1.50	≤ 1.0		38.0 42.0			
18	HXACo-50	≤ 0.25	≤ 2.00	≤ 2.00	≤ 0.02	≤ 0.02	25.0 29.0	10.0 14.0	0.5 1.5	≤ 1.0	≤ 1.0	47.0 52.0			

PHYSICAL PROPERTY OF SOME ALLOYS

No.	Grade	Normal Temperature Mechanical Property			High Temperature Short-Time Property			High Temperature Long Lasting Property		
		σ_b (Mpa)	σ_s (Mpa)	δ_5 (%)	T (°C)	σ_b (Mpa)	δ_5 (%)	TC (°C)	σ_b (Mpa)	Breaking Time \geq (h)
1	HXA24-7N(Re)	≥450	≥250	10 8	871	114	≥6	871	60	25
2	HXA18-8	≥450	≥200	25 15						
3	HXA18-12-Mo2	≥500	≥220	30 20						
4	HXA-20-10	≥490	≥235	25 10	871	99.9	9	871	69	6
5	HXA22-14-Mo	≥490	≥235	8 5	871	138	10	871	55	13
6	HXA25-20	≥450	≥245	10 8	982	61	15	982	48	11
7	HXA20-32NbM	≥450	≥185	30 25	900	86	25	900	40	100
8	HXA25-35NbM	≥450	≥250	8 6	900 1100	175 83	28 45	982 1050	42 25	25 100
9	HXA26-36-W5Co15M	≥490	≥315	≥5	982 1050	118 64	25 28	982 1100	41 22	100 31
10	HXA35-45NbM	≥450	≥245	5 3	1050	61	36	1050	25	100
11	HXA28-48-W5M	≥450	≥240	5 3	900 1050	108 61	30 30	1000	25	100
12	HXA27-37-W	≥450	≥216	8 5	1000	130	25	1050	24	100
13	HXA34-50-W15	≥590	≥300	10 6	982 1090	118 63	30 45	1050	17	100
14	HXA20-60-Mo2	≥450	≥250	≥6						
15	HXA25-58-M	≥450	≥250	12 8	900	150	25	900	46	100
16	HXACo-20	≥450		≥5	1000	164	32	1000	30	100
17	HXACo-40	≥560		≥20	1000	170	30	1000	40	100
18	HXACo-50	≥560		≥15	1100	76	32	1000	45	100