Copper foil
Aluminum foil
Paper covered wire
Fiber glass covered wire
Enameled Flat winding wire
Enameled Round winding wire

Zhengzhou LP Industry Co.,Ltd.

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Enterprise introduction 企业简介





郑州蓝普实业有限公司成立于1993年,公司总部位于中国最大的交通枢纽中心河南省郑州市,经过30多年的发展,公司目前已是中国北方最大的电磁线生产企业,年生产量10万余吨。公司占地面积300亩,拥有员工350余人,其中工程管理人员50余人,固定资产投资8亿元。生产和检测设备均引进意大利和法国。公司全面推行ISO9001质量管理体系和ISO14001环境管理体系认证。产品全部采用IEC,GB,JIS,NEMA生产标准,部分产品通过美国UL认证。

蓝普从成立至今一直致力于电磁线的研发和生产,是中国机械工业联合会与国家电网公司联合认证的国内变压器推荐用电磁线8家供货单位之一,参与了国家电磁线标准制定.公司选用优质的江西铜业和国外智利3C电解铜板以及中铝电工专用铝杆为原材料,熔炼—轧制—挤压—拉丝—漆包—绕包完善工艺,控制严谨,保证电磁线品质的稳定性与一致性。公司坚持:"品质第一"的质量理念。从原材料,半成品。成品均实行件件检测,出厂前再综合抽检同时建立了可追溯性生产质量记录。蓝普电磁线凭借优质的产品质量和完善的销售网络与ABB、西门子、国家电网、特变电工等国内外知名企业长期深度合作,配套,确立了行业内的优势地位。

蓝普实业满足客户发展要求,不断研发新型电磁线产品,致力于为变压器,电机,新能源汽车等领域提供世界级的电磁线产品为目标而不懈努力。

Founded in 1993, Zhengzhou LP Industry Co., Ltd. is headquartered in the largest transportation center city Zhengzhou, Henan in China. After the development of over 30 years, now LP Industry has become the biggest magnet wire manufacturer in North China with an annual output of over 100,000 tons. The company occupies an area of 200,000 square meters, owns over 350 staff including 50 in management team and is with a total asset value of 800,000,000RMB. Equipped with imported manufacturing facilities from Italy and France, LP comprehensively performs ISO 9001 and ISO 14001 management systems. All products comply with IEC, JIS, NEMA and GB standards, and main items are UL certified too.

Since the start it has been specializing in the R&D and production of magnet winding wires, being one of the 8 designated magnet wire suppliers for domestic transformer industry, which is certified by China Machinery Industry Federation and the State Grid, and participating in the national magnet wire standards making.LP Industry takes the 3C Electrolytic copper panel and aluminum rod of high quality from Jiangxi, Chile and China Aluminum Corporation as the raw material, integrating the art: smelting -- rolling -- extruding -- drawing -- enameling and spooling in strict control to keep the quality of magnet wire stable and consistent. The company insists on the value "Quality Comes First", and performs inspection on raw material, semi-finished products and finished products in 100%. Before shipment, we will carry out sampling inspection again and build traceable quality record. Taking the advantage of perfect quality and complete sales channel, LP Industry has established long-term partnership with famous brands all over the world such as ABB, Siemens, the State Grid and TBEA etc., ranking top in the industry all the time.

Devoting itself to meeting customers' evolving demand, LP Industry will continuously fight for researching, developing and providing world-class magnet wires for the industries including transformer, motor and new energy cars etc.



ENTERPRISE CULTURE 企业文化

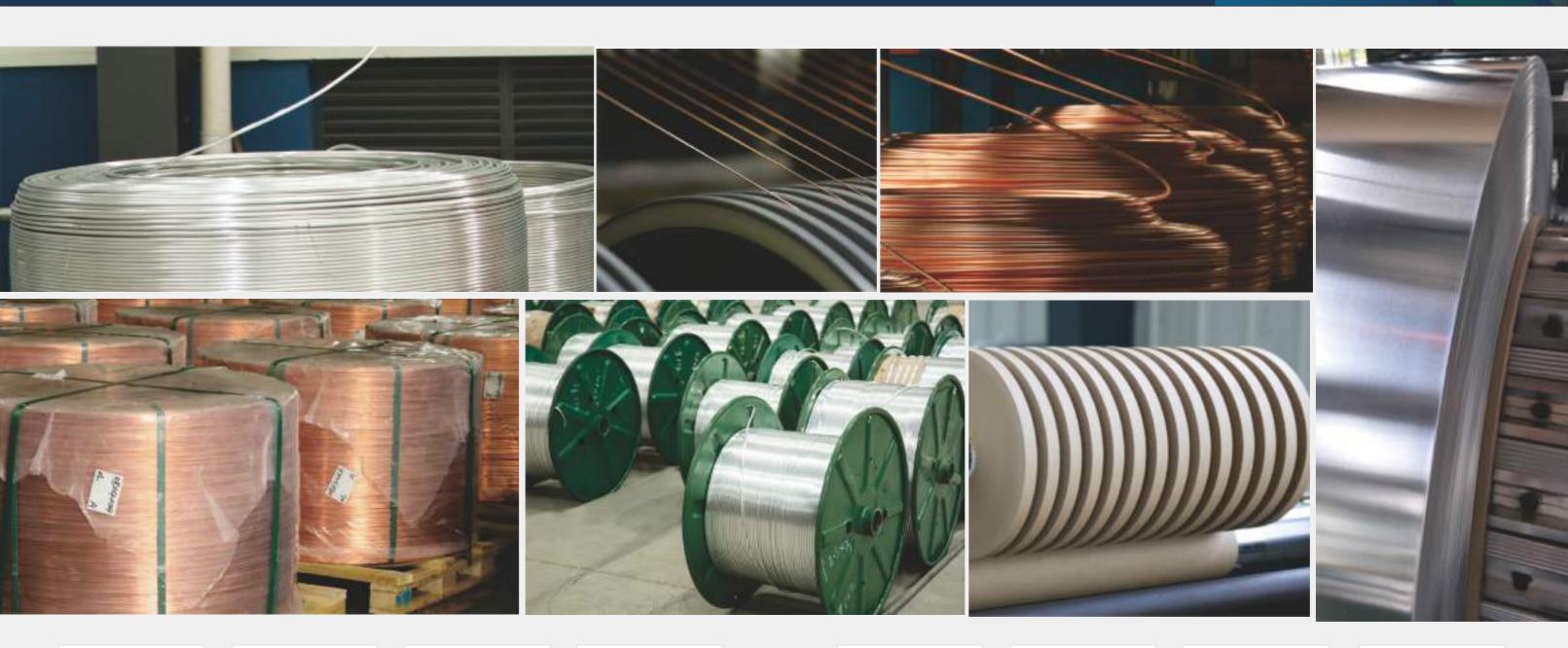


Quality Control and Certificates 质量管控及认证



Entire staff participation of inspection and online test equipment to ensure the performance of the magnet wire

Raw material suppliers 主要原材料供应商

















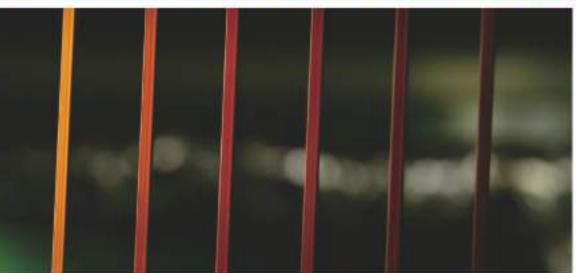




Workshop & Equipment 年间&设备











- •33 Energy saving enameled wire production lines
- •35 Intermediate wire drawing machines
- •4 New-type flat wire machines

- •4 Breakdown wire drawing machines
- •13 Fine wire drawing machines
- •4 New-type high speed extruding machines

- •24 Finish wire drawing machines
- •9 Flat wire production devices
- •4 New-type round wire machines
- •2 Extrusion machines
- •4 Oxygen-free rod production lines
- •4 Rolling mills

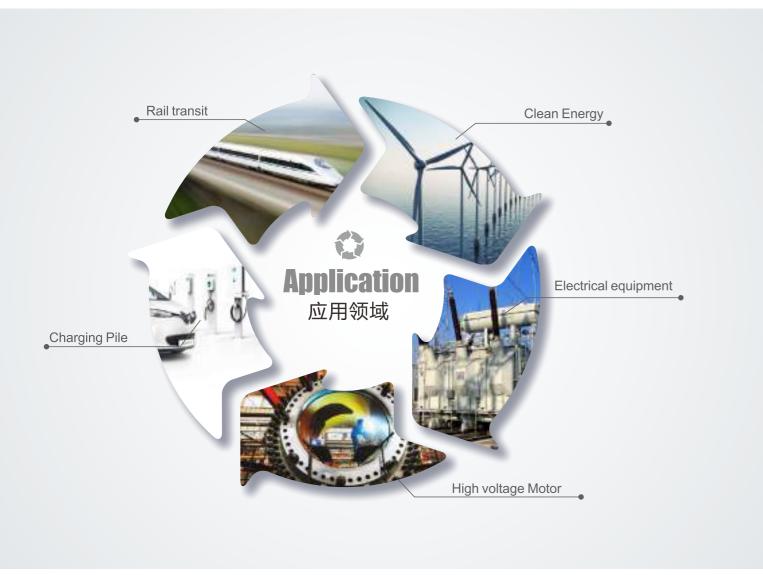
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Application

应用领域

Cooperative partner

合作伙伴





LP products are mainly used in the application of power transmission and distribution as well as rail transit, and constantly expands to environment friendly wind power generation, photovoltaic, medical equipment, hybrid electric vehicles and other fields

Except for domestic market, LP products are widely exported to Asia-Pacific, Europe and Americas, acting as the qualified supplier of ABB, SIEMENS, WEG etc.

- L | 13/14

LP product

蓝普产品





Enameled Round Wire

漆包圆线



技术参数 Technical Parameter



Name	Enameled Round Wire		
Conductor	Copper and Aluminum		
5	Copper	0.016 ~ 7.0mm	
Dimension	Aluminum	0.16 ~ 10.0mm	
Thermal Class (°C)		E), 180(Class H), 200(Class C), 220), 240 (Class HC)	
Insulation thickness	G1, G2, G3		
Certificate	UL		
Standard	IEC,NEMA,	GB,JIS	
Packing	Copper	PT-4~PT-200 or ply-wood spool	
Facking	Aluminum	PT-15~PT-270 or ply-wood spool	
Application		ner, motor, generator, modern it, welding machine, etc.	

Enameled Rectangular Wire

漆包扁线





技术参数 Technical Parameter

Name	Enameled Rectangular Wire			
Conductor	Copper and Aluminum			
Dimonion	Copper Thickness(a) 0.3 ~ 10.0mm Width(b) 1.0~22mm			
Dimension	Aluminum Thickness(a) 0.8 ~ 10.0mm Width(b) 2.0-25mm			
Thermal Class (°C)	120(Class E), 180(Class H), 200(Class C), 220 (Class C+), 240 (Class HC)			
Insulation thickness	Single, Heavy			
Certificate	UL			
Standard	IEC,NEMA,GB,JIS			
Packing	30kg ~150kg ply-wood spool (250*400 /250*500/ 250*600 / 250*730)			
Application	Transformer, motor, generator, modern instrument, welding machine, etc.			

Enameled Square Wire

漆包方线

技术参数

Technical Parameter



Enameled Square Wire Name Conductor Copper and Aluminum Copper Thickness(Width)/a(b) 0.45~6.0mm Dimension Aluminum Thickness(Width)/a(b) 1.2~9.1mm 180(Class H), 200(Class C), 220(Class C+), Thermal Class (°C) 240(Class HC) Insulation Single, Heavy thickness Certificate IEC,NEMA,GB,JIS Standard $30 \text{kg} \sim 150 \text{kg ply-wood spool} \ (250*400 / 250*500 /$ Packing 250*600 / 250*730) Transformer, generator, refrigeration system, Class C genaerators, UPS power supply, electronic transformer, etc. Application

Ultra-fine Enameled Rectangular Copper Wire

超微细漆包扁铜线





技术参数 Technical Parameter

Name	Ultra-fine Enameled Rectangular Copper Wire
Conductor	Copper
Dimension	Thickness(a) 0.1 ~ 0.6mm Width(b) 0.2 ~ 6.0mm
Thermal Class (°C)	180(Class H), 200(Class C), 220(Class C+), 240(Class HC)
Feature	Solderable and Self-bonding
Certificate	UL
Standard	IEC,NEMA,GB,JIS
Packing	PT-4 / PT-10 Plastic spool 5kg~150kg ply-wood spool (250*400 /250*500/ 250*600 / 250*730)
Application	High temperature voltage device, instrumentation and various types of electronic windings, etc.

Insulation Winding Wire

纸包线



技术参数 Technical Parameter



Name	Insulation P	aper Covered Wire		
Conductor	Copper and Aluminum			
	Round	1.0 ~ 7.0mm		
Dimension	Rectangular	Thickness(a) 0.9 ~ 10mm Width(b) 3.0 ~ 25mm		
Insulation materials		hermally upgraded kraft paper er / Polyester film/ Polyimide film		
Insulation thickness	Single,double	e or according to your requirement		
Standard	IEC,NEMA,G	BB,JIS		
Packing	30kg~150kg	Ply-wood spool (250*500/ 250*600)		
Application		transformer windings, medium and large or and power substations, etc.		

Insulation Winding Wire

玻璃丝包线





技术参数 Technical Parameter

Name	Insulation Fiber Glass Winding Wire			
Conductor	Copper and Aluminum wire			
	Round	1.0 ~ 7.0mm		
Dimension	Rectangular	Thickness(a) 1.0~ 10.0mm Width(b) 3.0 ~ 35.0mm		
Insulation material type	Fiber Glass, Fiber-glass+ Varnish, Fiber-glass+Film,etc			
Insulation thickness	Single, double or according to your requirement			
Standard	IEC,NEMA,G	B,JIS		
Packing	30kg~150kg	Ply-wood spool (250*500/250*600)		
Application		transformer windings, medium and large or and power substations, etc.		

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Corona Resistance Enameled Round Copper Wire

耐电晕漆包铜线



技术参数 Technical Parameter



Name	Corona Resistance Enameled Round Copper Wire
Conductor	Copper
Dimension	0.5 ~ 2.5mm
Thermal Class (°C)	200 (Class C)
Standard	JB/T10930-2010
Packing	PT 25 or Custom Made
Feature	This product can work under 200 (°C)environment continuously, expect for the excellent performance in heat, solvent and abrasion resistance, it is also corona resistant, which will shield the wire from corona discharge, extending the lifespan of variable frequency motors.
Application	Variable frequency motor, speed regulating motor, lifting motor, elevator motor and other fields.

Copper Foil / Coil





铜带

技术参数 Technical Parameter

Name	Copper Foil/Coil			
Grade	Cu-ETP/C-11000/E-Cu58			
Temper	Soft(O), Hard	(H)		
Dimension	Thickness	0.1 ~ 4.0mm		
	Width	20 ~ 1500mm		
Standard	ASTM, EN 13599, GB-T 18813-2002			
Packing	In coil, inner diameter 300mm, 400mm, 500mm, etc.			
Appication	Winding of transformers, Large Scale motors, Generator and stators, etc.			

Aluminum Foil / Coil



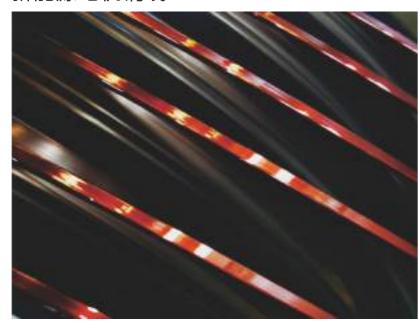
铝带

技术参数 Technical Parameter

Name	Aluminum Foil/0	Coil		
Grade	1050,1060,107	70,1350,etc.		
Temper	Soft(O), Hard (H)		
Dimension	Thickness	0.2 ~ 3.0mm		
Dimension	Width 20 ~ 1500mm			
Standard	ASTM, GB/T 3880 2-2006, EN 485-4			
Packing	In coil, inner diameter 300mm, 400mm, 500mm, etc.			
Application		nsformers, Large Scale motors d stators ,heater, etc.		

Enameled Rectangular Copper Wire

新能源电机铜线



技术参数 Technical Parameter

Name	Enameled Rectangular Copper Wire			
Conductor	Copper			
	Thickness(a) 1.126.0mm			
Dimension	Width(b) 2.516mm			
	b/a ≤ 8			
Thermal Class (°C)	220 (Class C+),200(Class C),			
Thermarciass (C)	180 (Class H)			
Insulation Thickness	Single, Heavy			
Certificate	UL			
Standard	IEC,NEMA,GB,JIS			
Packing	PB 500 160180kg/Spool			
Application	New energy drive motor			

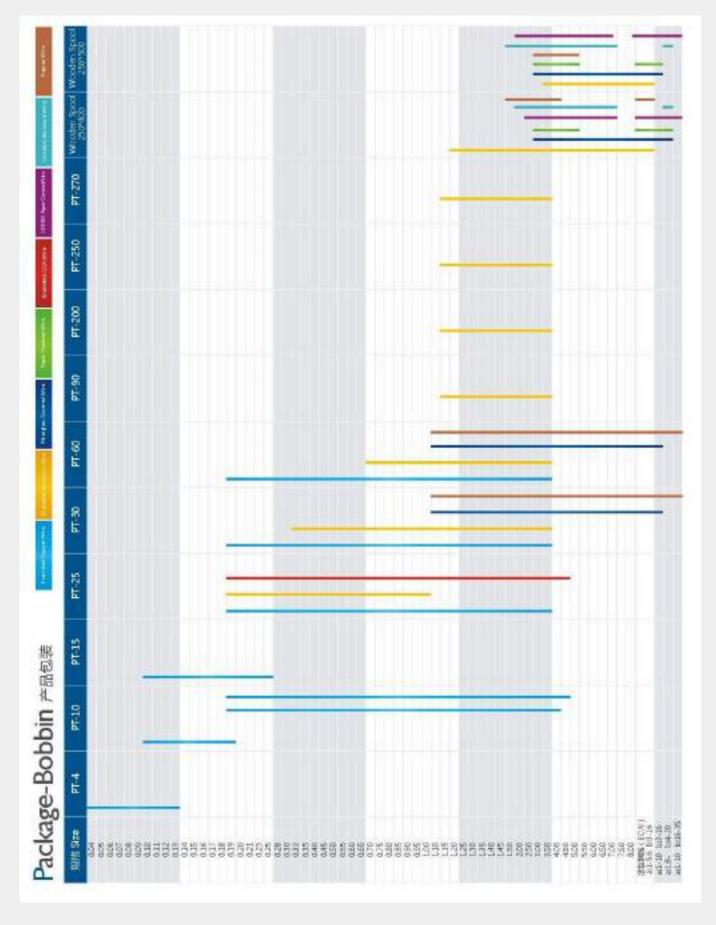
Polyvinyl Acetal Enameled Rectangular Wire

缩醛漆包扁线



技术参数 Technical Parameter

Name	Polyvinyl Acetal Enameled Rectangular Wire			
Conductor	Copper and Aluminum			
Dimension	Aluminum Thickness(a) 0.8 ~ 10mm Width(b) 2.0 ~ 25mm			
	Copper Thickness(a) 0.3 ~ 10mm Width(b) 1.0 ~ 22mm			
Thermal Class (℃)	105(Class A), 120(Class E)			
Standard	NEMA MW 18-A,NEMA MW 18-C			
Certificate	UL			
Insulation Thickness	Heavy, Quad			
Application	Oil transformer, oil filled voltage regulator, etc.			



					Specification of Enameled Aluminum Wire-II			
サ林県府道径 男体公置 Diameter of Tolerance of Conductor Conductor (mm) (mm)	Tolerance of	配小在光序版 Mini. Increase Diameter(mm)			龍大外径 Max. Finished Overall Diameter(mm)			
		Class One	Class Two	31R Class Three	Class One	218 Class Two	Class Thre	
0.250	#00.004	0.017	0.002	0.048	0.293	0,297	0.312	
0.265	±0.004	0.018	0.033	0.050	0.297	0.314	0.330	
0.290	+0.004	0.018	5.033	0.050	0.912	0.329	0.345	
8.300	20,004	0.019	0.015	0.058	0.334	0.352	0.199	
0.315	±0.004	0.019	0.015	0.059	0.349	0.367	0.384	
0.335	±0,004	0.020	0.058	0.057	0.872	0.301	0.408	
0.355	±0.004	0.020	0.018	0.057	0.892	0.411	0.428	
0.375	±0.005	0.021	0.040	0.060	0.454	0.494	0.453	
6,400	+0.005	0.021	0.040	890.0	0.439	0.499	0.478	
0.425	#0.00%	0.022	0.042	0.064	0.4irii	0.486	0.508	
0.450	±0.005	9.022	0.042	0.064	0.491	0.533	0.583	
0.475	±0.005	0.024	0.045	0.067	0.510	0.541	0.562	
0.500	±0.005	0.024	0.045	0.067	0.544	0.566	0.587	
0.590	±0.006	0.025	0.047	0.071	0.576	0,880	0.623	
0.560	#U.006	0.025	0.047	0.071	0.606	0.690	0.653	
0.600	±0.006	0.027	0.050	0.075	0.649	0.674	0.698	
0.690	±9.00€	0.027	0.050	0.075	0.679	0.704	0.728	
0.670	W0'001	0.028	0.05)	0.080	0.722	0.749	0.774	
0.71.0	±0.007	0.020	0,053	0,080	0,762	0.789	0.814	
0.750	±0.00E	0.030	0.056	0.095	0.805	0,894	0.861	
6.800	±0.00€	0.000	0.056	0.085	0.055	0.884	0.911	
0.850	±0.009	0.032	0.060	0.090	0.909	0.939	0.968	
8.900	±0.009	0.032	0.050	0.000	0.955	0.089	1.016	
0.950	*0.000	0.014	0.061	290,0	1.012	1.044	1,074	
1,000	±0,010	0.094	0.063	0.095	1.062	2.094	1.124	
1.060	±0.011	0.034	0.065	0.098	1.134	1.157	1.188	
1120	±0.00.2	0.094	0.065	0.098	1.184	1.217	1,246	
1.180	10.012	0.005	0,067	0.100	3.246	1,279	1311	
1,250	+0.01.1	260.0	0.067	0.1.00	1.316	1.349	1.381	
3.300	10.013	0.036	0.059	0105	1.386	1.422	LASS	
1,400	+0.014	0.016	0.069	0.108	1,468	1.502	1.505	
1.500	*0.m.s	0.036	0.071	0.107	1.570	1.606	1.640	
1,800	910.016	0.036	0.071	0.107	1,676	1.706	1,740	
1.700	±0.017	0.039	0.073	0.210	1.772	1.609	1.844	
3.800	#0.0TB	0.099	0.073	0.110	1.872	1.909	1.944	
1.900	±0.01.9	0.040	0.075	0.1.13	1.974	2.012	2.048	
2,000	*0.020	0.040	0.075	0.714	2.078	2112	234E	
3.120	±0.021	0.043	0.075	0.116	2.196	2,295	2,272	
2240	±0.022	0.041	0.077	0.118	2.816	2.855	2,892	
2360	±0.024	0.042	0.079	0778	2.498	2.478	2,516	
2500	±0.025	0.042	0.079	0.119	2.578	2,618	2,656	
2,650	±0.027	0.043	0.083	0,128	2.790	2.772	2811	
2,800	±0.028	0.043	0.081	0.129	2.880	2.922	2.961	
3.000	±0.090	0.049	0.084	0.127	3.089	F.126	1,166	
8.150	±0.002	0.645	0.084	0.127	31,2313	1.276	3.31€	
3,350	20.014	0.046	0.086	0.130	3.435	1.479	#321	
3.350	40.00 G	0.046	0.086	0.130	2,635	3,679	3.721	
3.750	±0.038	0.047	0.889	0.134	8.838	3.883	1.908	
4,000	±0.040	0.047	0.089	0.134	4.088	4.133	4376	
4,250	±0.043	0.049	0.092	0.536	4341	4.387	4.431	
				0.138				
4.500	#0.045	0.049	0.092		4.591	4837	4.651	
4750	主0.04世	0.050	0.094	0.147	4.040	4.901	4,900	
5.000	±0.095	0.050	0.094	0.142	5.089	5:141	5.185	

	ERRO COM	******			H-H2		
对本标数直接 Diameter of Tolerance of		Mini.	高小把學學原 Increase Diamet	er(mm)	最大外径 Max Rhished Overall Diameter (mm)		
(mm) Conductor (mm)	Class One	2® Class Two	S/D Class Three	100 Class One	21% Class Two	Class Th	
0.018		0.002	0.004		0.022	0.024	
0.019		0.002	0.004		0.023	0.026	
0.02		0.002	0.004		0.024	0.027	
0.021		0.002	0.004		0.026	0.028	
0.022		0.002	0.005		0.027	0.03	
0.024		0.002	0.005		0.029	0.032	
0.025		0.003	0.005		0.031	0.034	
0.027		0.003	0.005		0.033	0.036	
0.028		0.003	0.006		0.034	0.038	
0.03		0.003	0.006		0.087	0.041	
0.032		0.003	0.007		0.039	0.046	
0.034		0.003	0.006		0.041	0.043	
0.036		0.004	0.008		0.044	0.049	
0.038		0.004	0.008		0.046	0.051	
0.04		0.004	0.008		0.049	0.054	
0.043		0.004	0.009		0.052	0.058	
8945		0.005	0.01		0.055	0.061	
0.048		0.005	0.01		0.059	0.065	
0.05		0.005	0.01		0.06	0.066	
0.053		0.005	0.011		0.064	0.07	
0.056		0.006	0.011		0.067	0.074	
0.06		0.006	0.012		0.072	0.079	
0.063		0.006	0.012		0.076	0.083	
0.067	0.003	0.007	0.012	0.01.8	0.08	880.0	
0.071	0.003	0.007	0.012	0.018	0.084	0.091	0.097
0.075	0.003	0.007	0.014	0.02	0.089	0.095	0.10
0.08	0.003	0.007	0.014	0.02	0.094	0.101	0.10
0.085	0.003	0.008	0.015	0.022	0.1	0.107	0.11
0.09	0.003	0.008	0.015	0.022	0.105	0.113	0.12
0.095	0.003	0.008	0.016	0.023	0.111	0.119	0.120
0.1	0.003	0.005	0.016	0.023	0.117	0.125	0.13
0.106	0.003	0.009	0.017	0.026	0.123	0.132	0.14
0.112	0.003	0.009	0.017	0.026	0.15	0.139	0.147
0.118	0.003	0.01	0.019	0.028	0.136	0.145	0.15
0.125	0.003	0.01	0.019	0.028	0.144	0.154	0.16
0.132	0.003	0011	0.021	0.03	0.152	0.162	0.17
0.14	0.003	0.011	0.021	0.03	0.16	0.171	0.18
0.15	0.003	0.012	0.023	0.033	0.171	0.182	0.19
016	0.003	0.012	0.023	0.033	0.182	0.194	0.20
0.17	0.003	0.013	0.025	0.036	0.194	0.205	0.21
0.18	0.003	0.013	0.025	0.086	0.204	0.217	0.22
0.19	0.003	0.014	0.027	0.039	0.216	0.228	0.24
0.2	0.003	0.014	0.027	0.039	0.226	0.239	0.25
0.212	0.003	0.015	0.029	0.043	0.24	0.254	0.26
0.224	0.003	0.015	0.029	0.043	0.252	0.266	0.28
0.236	0.004	0.017	0.082	0.048	0.267	0.283	0.298
0.25	0.004	0.017	0.032	0.048	0.281	0.297	0.31
0.265	0.004	0.018	0.083	0.05	0.297	0.314	0.33
0.28	0.004	0.018	0.083	0.05	0.31.2	0.329	0.345
03	0.004	0.019	0.085	0.053	0.334	0.352	0.36

Tech	nical	Data
1001	LIICHAI	- uu

Specification of Enameled Copper Wire-IEC

P体标的直径 Diameter of	导体公差 Tolerance of	Mesi	Increase Diamet	er(mm)	Max Fine	關大外位 shed Overall Dia	meter(mm)
Conductor (mm)	(mm)	10) Class One	2版 Class Two	3/0 Class Three	110 Class One	210 Class Two	3級 Class Thre
0.315	0.004	0.019	0.035	0.053	0.349	0.367	0.384
0.335	0.004	0.02	0.038	0.057	0.372	0.391	0.408
0.355	0.004	0.02	0.038	0.057	0.392	0.411	0.428
0.375	0.005	0.021	0.04	0.06	0.414	0.434	0.453
0.4	0.005	0.021	0.04	0.06	0.439	0.459	0.478
0.425	0.005	0.022	0.042	0.064	0.466	0.488	0.508
0.45	0.005	0.022	0.042	0.064	0.491	0.513	0.533
0.475	0.005	0.024	0.045	0.067	0.519	0.541	0.562
0.5	0.005	0.024	0.045	0.067	0.544	0.566	0.587
0.53	0.006	0.025	0.047	0.071	0.576	0.6	0.625
0.56	0.006	0.025	0.047	0.071	0.606	0.63	0.653
0.6	0.006	0.027	0.05	0.075	0.649	0.674	0.698
0.63	0.006	0.027	0.05	0.075	0.679	0.704	0.774
0.67	0.007	0.028	0.053	0.08	0.722	0.749	0.728
071	0.007	0.028	0.053	0.08	0.762	0.789	0.814
0.75	0.008	0.03	0.056	0.085	0.805	0.834	0.861
0.8	0.008	80.0	0.056	0.085	0.855	0.884	0.911
8.85	0.009	0.082	0.06	0.09	0.909	0.939	0.968
0.9	0.009	0.082	0.06	0.09	0.959	0.989	1.018
0.95	0.01	0.034	0.063	0.095	1.012	1.044	1.074
1	0.01	0.034	0.063	0.095	1.062	1.094	1 124
1.06	0.011	0.034	0.065	0.098	1 124	1.157	1188
112	0.011	0.034	0.065	0.098	1 184	1.217	1.248
118	0.012	0.035	0.067	0.1	1.246	1.279	1.311
1.25	0.013	0.085	0.067	0.1	1.816	1.349	1.381
1.32	0.013	0.036	0.069	0.103	1 388	1.422	1.455
14	0.014	0.036	0.069	0.103	1.468	1.502	1 535
1.5	0.015	0.038	0.071	0.107	1.57	1.606	1.64
1.6	0016	0.038	0.071	0.107	167	1.706	1.74
1.7	0.017	0.089	0.073	0.11	1.772	1.809	1.844
1.8	0.018	0.039	0.073	011	1.872	1.909	1.944
1.9	0.019	0.04	0.075	0.113	1.974		2.048
						2.01.2	
2	0.02	0.04	0.075	0.113	2.074	2.112	2.148
2.1.2	0.021	0.041	0.075	0.116	2196	2.235	2.272
2.24	0.022	0.041	0.077	0.116	2.316	2.355	2.392
2.36	0.024	0.042	0.079	0.119	2.438	2.478	2.516
2.5	0.025	0.042	0.079	0.119	2.578	2.61.8	2.656
2.65	0.027	0.043	0.081	0.128	2.73	2.772	2.811
2.8	0.028	0.043	0.081	0.123	2.88	2.922	3.166
3	0.03	0.045	0.084	0.127	3.083	3.126	2.961
3.15	0.032	0.045	0.084	0.127	3.233	3.276	3.316
3.35	0.084	0.046	0.086	0.13	3.435	3.479	3.521
3.55	0.036	0.046	0.086	0.13	3.635	3.679	3721
3.75	0.088	0.047	0.089	0.154	3.838	9,883	3,926
4	0.04	0.047	0.089	0.134	4 088	4.138	4.176
4.25	0.043	0:049	0.092	0.138	4.341	4.387	4,431
4.5	0.045	0.049	0.092	0.138	4.591	4.637	4.681
4.75	0.048	0.05	0.094	0.142	4.843	4.891	4.936
5	0.05	0.05	0.094	0.142	5.093	5.141	5.188

	ō	마바리온 Diameter of Conductor	uctor	Į.	R cells Single Build	T S	Heavy Build	譚	Triple Build	
AMG AMG	報を開	FESSER Normal	最大百元 Max	RANGE Mrs. Incresse	Max Frished Dwerall Dameter	Rejustre Athul Increase	無大約径 Max Finished Overall Diameter	Bolding Mini, Increase	最大好吧 MarFmsbed Overal Diameter	ANG ANG
	mm	ww	uuu	ww	mim	mm	mm	mm	mm	
9.6	0.0119	0,0124	00130	0.0013	0,0165	0.0025	0.0206			22
55	0.0135	0.0140	0.0145	0.000.8	0.0178	0.0025	0.0221			5.5
4	0.0152	0.0157	0.0165	0.0013	0.0191	0.0025	0.0241			x
10	0/10/0	8/10/0	0,0135	0.0013	0,0216	0.0025	0.0262			27
100	0.0191	0.0198	0.0206	5000.0	0.0254	15000	0.0292	0.0076	0,0356	28
51	0.0216	0.0224	0.0234	0.0025	0.0279	0.0051	0.0330	0.0076	0.0881	51
\$00	0.0243	0.0251	0.0262	570000	0.0905	15000	0.0356	9/00/0	0.0406	05
49	0.0272	0.0282	0.0295	0.0025	0.0330	0.0051	0.0381	0.0039	0.0432	49
48	0.0902	0.0315	0.0528	0.0025	0.0981	0.0051	0.0452	0.0102	0.0483	4.5
47	0.0343	0.0356	0.0371	0.0025	0.0432	0.0076	0.0483	0.0127	0.0533	47
46	0.0384	0.0399	0.0417	0.0025	0.0470	0.0076	0.0533	0.014	2650.0	46
45	0.0429	0.0447	0.0464	0.00025	0.0521	97000	0.0584	0.014	0.0648	45
#	0.048	0.053	0.053	9000	0.320	0.010	650'0	0.015	0.074	4
4	0.053	950'0	0.053	9000	0.086	0000	60074	0.015	0.081	43
42	0.061	19000	9900	9000	9/0'0	0.010	0.081	0.018	0.089	42
41	0.069	0.073	0.074	9000	0.084	0.013	1600	0.018	660'0	41
40	0,076	67070	0.081	9000	960'0	0.015	0.102	0.020	0.109	40
50	0.086	0.089	1600	0000	0.104	0.005	0114	0.020	0.122	950
80 10	0:099	0,102	0104	0.008	611.0	0.01.8	0130	0.023	0.137	38
is.	0.112	0.114	5110	0000	0.152	0,000	0.145	0.025	0.152	37
36	0.124	0,127	0130	0.010	0.147	0.020	0100	0.028	0.170	98
un en	0,140	0.142	0.145	0000	0.163	0.023	0.178	0.030	0.188	100
544	4510	0710	0163	0.015	0.188	0.003	0110	0.055	0.208	×
333	0.178	0.180	0.183	0.013	0.206	0.029	0.224	0.036	0.234	33
C#	0.201	6,203	0206	0.015	0.231	0000	0.249	1600	0.262	25
31	0.224	0.226	0.229	0.005	0.254	0.058	0.274	0.048	0.290	91
30	0.251	0.254	0.257	810.0	0.284	0000	0.300	0.053	0.325	30
36	6.384	0.387	moon	0.018	0.061	0.000	0.338	0.058	0.250	40

	Die	Diameter of Conductor	ductor	is.	Single Build	Hea	Heavy Build	F	Triple Build	
#KAI [AWG]	Marie Marie	Normal Normal	MAX.	最小原理 Mint Increase	數大分級 Max Enished Overall Diameter	最小學師 Mini Increase	體太条径 Max Finished Overall Diameter	最小原理 Mani horease	量大分径 MaxFinished Overall Diameter	AME)
	uuu	uuu	uuu	ww	mm	mm	um	mm	шш	
228	0.318	0.520	0.323	0.020	0.356	0.041	0.373	0.058	0.394	野
17	0.353	0.361	0.363	0.020	0.396	0.041	0.417	1900	0.439	Si.
36	0.399	0.404	0.409	0.023	0.439	0.043	0.462	9900	0.485	500
52	0.450	0.455	0.460	0.023	0.493	0.046	0.516	690'0	0.538	25
24	9050	0.511	0.516	0.025	0.551	8100	175.0	0.074	0.599	72
23	8950	0.574	6250	0.025	0.617	0.051	0.643	9/00	0.668	23
22	0.635	0.643	0.650	0.028	0.686	0.053	0.734	0.081	0,742	22
27	0.716	0.724	0.732	0.028	0.770	0.056	0,800	0.086	0.082	72
20	0.805	0.613	0820	0000	0.854	150.0	0.892	0.009	0.922	92
119	0.902	0.912	0.922	0.030	0.963	0.054	0.993	0.094	1.026	19
12	1.013	1,004	1.054	0.083	1.077	9900	1330	0.099	1.143	18
17	1138	1.151	1163	0.036	1.207	1/00	1.240	0100	1.275	17
16	1.278	1.290	1.303	0.036	1.349	0.074	1.394	0109	1,422	16
15	1.435	1.450	1.466	0.038	1.509	9,000	1,549	0.11.7	1.588	1.5
14	1.613	1.628	1643	0.041	1.692	1900	1.732	0.122	1.773	7
113	1.811	1,529	1.847			130'0	1.935			13
17	2.092	2.052	2.073			0.083	2159			17
п	2251	2.304	2.327			0.084	2.416			#
10	2.583	2.588	2.614			0.085	2.703			10
	2.878	2,906	2.934			9900	3.023			di-
-	3251	3.264	3.297			6900	3,363			+0
	3.680	3.665	3701			6900	3,787			1-
	4.074	4115	4.155			0.091	4.244			9
	4.576	4.620	4.666			0.094	4755			38
210	5,138	5.139	5,240			1500	5.329			4
131	5.768	5.827	5.885							10
	6.477	6.543	6.609							N
	7.275	7.348	7422							Н

		Dia	B体高位 Diameter of Conductor	ductor	. 68	Single Build	Har	Heavy Build	學	Triple Suild	
lingh lingh <th< th=""><th>BW</th><th>Min.</th><th>SERVERIE Normal</th><th>最大語程 Mex.</th><th>Mrt. Increase</th><th>最大学年 Max Printhed Overall Diameter</th><th>Alini Incresse</th><th>Max Finished Overall Diameter</th><th>Alloi Increase</th><th>RCCPRS MaxFinished Overall Diameter</th><th>(Swe)</th></th<>	BW	Min.	SERVERIE Normal	最大語程 Mex.	Mrt. Increase	最大学年 Max Printhed Overall Diameter	Alini Incresse	Max Finished Overall Diameter	Alloi Increase	RCCPRS MaxFinished Overall Diameter	(Swe)
0,00047 0,00048 0,00049 <t< th=""><th></th><th>Inda</th><th>Inch</th><th>Inds</th><th>abeth 1</th><th>Indt</th><th>Inch</th><th>Bisch</th><th>Inch</th><th>Inch</th><th></th></t<>		Inda	Inch	Inds	abeth 1	Indt	Inch	Bisch	Inch	Inch	
0.00064 0,00065 0,00005 0,00005 0,00005 0,00005 0.00066 0,00006 0,00005 0,00005 0,00005 0,00005 0.00066 0,00007 0,00007 0,00007 0,00007 0,00005 0,00075 0,00007 0,00007 0,00007 0,00007 0,00007 0,000765 0,00008 0,00007 0,00007 0,00007 0,00001 0,00076 0,00008 0,00009 0,0001 0,0001 0,00015 0,0001 0,00076 0,00014 0,00015 0,0001 0,0001 0,0001 0,00015 0,00176 0,00176 0,0001 0,0001 0,0001 0,0001 0,0001 0,00176 0,00176 0,0001 0,0001 0,0001 0,0001 0,0001 0,00176 0,00176 0,0001 0,0001 0,0001 0,0001 0,0001 0,00176 0,00176 0,0017 0,0001 0,0001 0,0001 0,0001 0,00176 0,00176	36	0,00047	0.00049	0.00051	0.00005	0.00065	0.0001	0.00001			56
0.00064 0.00062 0.000054 <	15.5	0.00053	0.00055	2500000	0.00005	70000	0.0001	0.00087			55
0.000575 0.000078	35	90000	0.00062	99000'0	0.00005	0.00075	0.0001	0.00095			3
0.00055 0.000678 0.00051 0.0001 0.00015 0.00018 <t< td=""><td>53</td><td>0.00067</td><td>100000</td><td>0,00073</td><td>0.00005</td><td>0.00085</td><td>10000</td><td>0.00103</td><td></td><td></td><td>53</td></t<>	53	0.00067	100000	0,00073	0.00005	0.00085	10000	0.00103			53
0,000485 0,0007686 0,000768 0,000149	25.2	\$40000	0.00078	0.00051	0.0001	0.001	0.0002	0.00115	0.0003	0.0014	52
0.0005\$ 0.00013 0.00013 0.00113 0.00013 0.00014 0.00014 0.00014 0.00015 0.00014 0.00015 0.00015 0.00015 0.00015 0.00015 0.00014 <t< td=""><td>125</td><td>0,00065</td><td>0.00088</td><td>0.00092</td><td>10000</td><td>0,0011</td><td>0.0002</td><td>0.0013</td><td>0.0003</td><td>0.000.5</td><td>51</td></t<>	125	0,00065	0.00088	0.00092	10000	0,0011	0.0002	0.0013	0.0003	0.000.5	51
0.001167 0.00114 0.00115 0.00013 0.0015 0.0015 0.0015 0.00014 0.00114	20	950000	66000'0	0.00103	10000	0.0012	0.0002	0.0014	0.0003	91000	20
0,00115 0,00134 0,00134 0,00134 0,00134 0,00134 0,00134 0,00134 0,00146 0,00014 0,00013 <t< td=""><td>49</td><td>0,00107</td><td>0.00111</td><td>0.00116</td><td>10000</td><td>0.0013</td><td>0.0002</td><td>0.0015</td><td>0.0004</td><td>0.0017</td><td>49</td></t<>	49	0,00107	0.00111	0.00116	10000	0.0013	0.0002	0.0015	0.0004	0.0017	49
0.00135 0.00144 0.00146 0.00014 0.00146 0.00014 0.00189 0.0003 0.0019 0.0005 0.00151 0.00154 0.00014 0.00018 0.00019 0.00023 0.0002 0.00029 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006 0.00023 0.00006<	46	0.00119	0.00134	621000	0.0001	0.0015	0.0002	0.0017	90000	67000	48
0.000151 0.000154 0.000164 0.000185 0.000176 0.000164 0.000176	47	0.00135	0.0014	0.00146	0.0001	0.0017	0.0003	0.0019	90000	0.0021	47
0.000169 0.00176 0.00183 0.00016 0.0024 0.0003 0.0003 0.0002 0.0003 0.	46	0.00151	0.00157	191000	12000	0.00185	90000	0.0021	0,0006	0.00035	98
0.0019 0.002 0.0024 0.0004 0.0005 0.0004 0.0005 0.0006 0.0021 0.0022 0.0026 0.0026 0.0004 0.0029 0.0006 0.0024 0.0025 0.0026 0.0038 0.0004 0.0029 0.0006 0.0024 0.0025 0.0026 0.0038 0.0039 0.0008 0.0008 0.0008 0.0034 0.0026 0.0029 0.0029 0.0039 0.0008 0.0008 0.0008 0.0034 0.0035 0.0029 0.0037 0.0036 0.0049 0.0008 0.0008 0.0044 0.0048 0.0002 0.0041 0.0008 0.0004 0.0008 0.0008 0.0008 0.0049 0.0049 0.0042 0.0049 0.0049 0.0008 0.0008 0.0008 0.0008 0.0049 0.0054 0.0004 0.0008 0.0008 0.0008 0.0008 0.0008 0.0008 0.0054 0.0056 0.0004 0.0008 0.000	45	0.00169	0.00176	0.001.83	10000	0.00205	0.0003	0.0023	90000	0.00255	45
0.0021 0.0022 0.0023 0.0025 0.0025 0.0026 0.0029 0.0029 0.0039 0.0009<	44	0.0019	0.002	0.0021	0.0002	0.0024	10000	0.0027	90000	670070	4
0.0024 0.0025 0.0026 0.0039 0.0004 0.0035 0.0009 0.0023 0.0023 0.0002 0.0033 0.0005 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0006 0.0036 0.0006	43	0.0021	0.0022	0.0025	0.0002	0.0026	0.0004	0,0029	90000	0.0032	43
0.0027 0.0028 0.0029 0.0028 0.0039 0.0039 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0036 0.0006 0.0048 0.0006<	42	0.0024	0.0025	0.0026	0.0002	0.003	0.0004	0.0032	0.0007	0.0035	42
0.0034 0.0034 0.0035 0.0034 0.0036 0.0036 0.0036 0.0006<	17	0.0027	0.0028	0.0029	0.0002	0.0083	00000	0.0036	0.0000	0.0039	41
0.0034 0.0035 0.0036 0.0041 0.0045 0.0045 0.0046 0.0047 0.0047 0.0047 0.0047 0.0047 0.0041 0.0054 0.0054 0.0004 0.0004 0.0004 0.0004 0.0004 0.0004 0.0001 0.0001 0.0054 0.0056 0.0004 0.0004 0.0004 0.0014 0.0014 0.0014 0.0068 0.0068 0.0006 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0012 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014 0.0014	40	0.003	0.0031	0.0032	0,0002	0.0037	00000	0.004	0,0006	0.0043	40
0.0039 0.0044 0.0041 0.0005 0.0047 0.0051 0.0059 0.0044 0.0045 0.0005 0.0052 0.0006 0.0057 0.001 0.0044 0.0045 0.0004 0.0052 0.0059 0.001 0.001 0.0055 0.0056 0.0054 0.0064 0.0064 0.007 0.0013 0.0057 0.0054 0.0005 0.0072 0.001 0.0073 0.0013 0.0077 0.0071 0.0054 0.0005 0.0011 0.0078 0.0013 0.0079 0.0071 0.0005 0.0091 0.0012 0.0014 0.0098 0.0056 0.0091 0.0012 0.0018 0.0016 0.0098 0.010 0.0012 0.0018 0.0019 0.0019 0.0011 0.0012 0.0012 0.0012 0.0019 0.0011	96	0.0034	0.0035	96000	0.0002	0.0041	90000	0.0045	90000	0.0048	39
0.0044 0.0045 0.0046 0.0046 0.0046 0.0046 0.0057 0.001 0.0049 0.0054 0.0058 0.0058 0.0063 0.0063 0.0011 0.0054 0.0056 0.0054 0.0064 0.0063 0.0063 0.0011 0.0057 0.0056 0.0056 0.0064 0.0078 0.0013 0.0013 0.0077 0.0072 0.0068 0.0011 0.0078 0.0014 0.0078 0.0079 0.0091 0.0012 0.0014 0.0079 0.008 0.0091 0.0012 0.0014 0.0099 0.011 0.0012 0.0014 0.0014 0.0099 0.011 0.0012 0.0014 0.0011 0.0012 0.0011 0.0114 0.0017 0.0015 0.0013 0.0012 0.0013	28	0.0039	0.004	0.0041	0.0003	0.0047	0.0007	15000	0,0009	0,0054	38
0.0049 0.005 0.0051 0.0054 0.0058 0.0053 0.0012 0.0055 0.0056 0.0057 0.0004 0.0064 0.0079 0.0072 0.0012 0.0052 0.0054 0.0005 0.00072 0.0011 0.0078 0.0013 0.0079 0.0072 0.0005 0.0091 0.0012 0.0014 0.0079 0.006 0.0091 0.0012 0.0018 0.0014 0.0098 0.006 0.0091 0.0012 0.0018 0.0011 0.0099 0.011 0.0012 0.0011 0.0011 0.0011 0.0011 0.0011 0.0012 0.0011 0.0011 0.0011 0.0011 0.0011 0.0012 0.0012 0.0011 0.0012	87	0.0044	0.0045	0.0046	0.0003	0.0052	0.0008	2500'0	1000	0000	37
0.0055 0.0056 0.0057 0.0004 0.0064 0.0054 0.0054 0.0052 0.0012 0.0078 0.0013 0.0057 0.0054 0.0005 0.0001 0.0011 0.0013 0.0014 0.0079 0.0054 0.0006 0.0091 0.0012 0.0014 0.0014 0.0058 0.0058 0.0006 0.001 0.0013 0.0018 0.0017 0.0099 0.011 0.0012 0.0012 0.0013 0.0119 0.0021 0.0011 0.0011 0.0014 0.0012 0.0013 0.0013 0.0021	98	0.0049	500'0	0.0051	0,0004	0.0058	0.0005	0.0063	110000	0.0067	36
0.0062 0.0063 0.0054 0.0005 0.0072 0.0013 0.0013 0.007 0.007 0.0005 0.0081 0.0014 0.0014 0.007 0.008 0.0009 0.0091 0.0013 0.0016 0.008 0.009 0.000 0.012 0.0018 0.0017 0.009 0.011 0.0012 0.0018 0.0019 0.0011 0.0011 0.0011 0.0012 0.0013 0.0013 0.0012	120	0.0055	9500.0	0.0057	0.0004	0.0064	00000	0.007	0.0012	0.0074	35
0.007 0.0071 0.0072 0.0008 0.0081 0.0014 0.0014 0.0079 0.008 0.006 0.0091 0.0012 0.0098 0.0015 0.0099 0.01 0.0012 0.0014 0.0119 0.0021 0.0011 0.0014 0.0015 0.0013 0.0021	H	0.0062	0.0063	0.0054	0,0005	0.0072	1000	0.0078	0.0013	0.0082	#
0.0079 0.006 0.0091 0.0012 0.0098 0.0015 0.008 0.009 0.0006 0.01 0.0013 0.0108 0.0017 0.009 0.01 0.0007 0.0112 0.0013 0.0013 0.0021 0.011 0.011 0.0007 0.0126 0.0013 0.0022	22	0.007	1,0000	0.0072	90000	0.0031	11000	0.0088	0.0014	0,0092	33
0.0088 0.0099 0.0006 0.01 0.0013 0.0108 0.0017 0.0099 0.011 0.0007 0.0112 0.0014 0.0119 0.0021 0.0112 0.0114 0.0007 0.0126 0.0015 0.0013 0.0022	32	6700.0	0,000	0.0081	90000	0.0091	0.0012	0.0098	0.0016	0.0103	32
0.0099 0.01 0.0001 0.0012 0.0014 0.0119 0.0021 0.0112 0.0114 0.0007 0.0126 0.0015 0.0133 0.0022	II.	0.0088	0.0089	6000	0,0006	10:0	0.0013	00100	0.0017	0.0114	31
0.0112 0.0118 0.0114 0.0007 0.0126 0.0015 0.0012 0.0022	30	0.0099	10:0	10100	0.0007	0.0112	0.0014	0.0119	0.0021	0.0128	30
	250	0.0112	0.0115	0.0114	0.0007	0.0126	0.0015	0.0133	0.0022	0.0141	29

	D	98명을 Dameter of Conductor	actor	5	Single Build	Hate	Haavy Build		Think Build	
AWG	MANAGE MANA	Normal Normal	EX-RES	Min. Increase	是大計學 hax Finished Overall Dameter	#EUNTR Mint. Increase	윤大의은 Nax Rrished Overall Dameter	Mini Increase	Marfinshed Derat Dameter	MANG)
	thu)	inch	he	Inch	hch	hach	inch	inch	inch	
	0.0125	97100	72100	0,000.0	0.014	0.0016	0.0347	0.0023	0.0155	120
	0.0141	0.0342	0.0143	0,000	95100	0.0016	0.0164	0.0024	0.0173	27
	72,00	0.0159	19100	60000	0.0173	0.0017	0.0182	0.0026	0.0191	36
	77,000	6/100	0.0131	60000	16100	0.0013	0.0203	0.0027	0.0212	25
	0.0199	0.0201	600000	1000	CH2010	0.0019	0.0227	0.0029	0.0236	77
	0.0224	0.0226	0.0228	1000	0.0248	0.02	0.0253	0.003	0.0268	23
	0.025	0.0253	00256	0.0011	2200	0.0021	0.0281	0.0032	0.0292	77
	0.0282	0.0285	0.0288	0.0011	0.0903	0.0022	0.0315	0.0034	0.0926	77
	0.0317	0.032	0.0323	0.0012	0.034	0.0024	0.0351	0.0035	0.0363	20
	0.0355	0.0359	0.0363	0.0012	0.0379	0.0025	0.0391	0.0037	0.0404	13
	0.0399	0.0403	0.0407	0.0013	0.0424	0.0026	0.0437	0.0039	0.045	1.8
	0.0448	0.0453	0.0450	0.0014	0.0475	0.0028	0.0483	0.0041	0.0502	17
	0.0503	0.0508	0.0513	0.0014	0.0531	0.0829	0.0545	0.0843	0.056	16
	0.0565	1720,0	0.0577	0.0815	0.0594	0.083	150'0	0.0046	0.0625	15
	0.0835	0.0041	79900	91900	0.0666	0.0032	0.0562	0.0848	0.00%	14
	0.0713	0.072	0.0727			0.0032	0.0762			13
	900	0.0808	0.0815			0.0032	0.085			17
	0.0893	0.0907	0.0915			0.0033	19600			11
	0.1009	0.1019	01027			0.0094	01084			10
	0.1133	0.1144	01153			0.0034	9110			ø.
	0.1272	0.1285	01294			0.0035	0.1382			00
	0.1429	01443	01453			0.0035	0.1491			1-
	0.1604	0.162	01632			0.0036	0.1671			10
	0.1801	0.1319	01832			0.0037	0.1872			M
	0.2023	0.2043	02058			0,0037	0.2038			4
	0.2271	0.2294	02317							m
	0.255	0.2576	0.2602							7
	0.2864	0.2893	0.2922							in

