

Ver. 20.1

Company Introduction



CEO MESSAGE

We greatly appreciate your favor and love to [KBI ALLOY Co., Ltd.].

[KBI ALLOY], as the leading company in the spot resistance welding materials field for automobile, has ranked first with the largest market share in Korean market and captured about 5~10% of market share in the world market in 2019 since it was incorporated into [KBI Group] in 2008. Recently, we have been developing and exporting aircraft wire material for the first time in Korea. In addition, we have established [a technical research institute] to spur development of materials for automotive connectors and special tube for Co2-Tip for welding thick steel plate in ship building industry. And, it has already been recognized for quality in the world market, and 85% of total sales is exported to more than 20 countries including USA, Germany, Japan and France as the forefront country in this field and we received a \$20 million dollar export award in 2014.

[KBI ALLOY] promises to be a company that will do its best to its customers with price and quality, with the management policy of 1, Customer First 2, Efficient Production Management, 3 Technology Securing under the mission of respecting customers and employees and being a responsible company for society.

C.E.O H. S. Park / B. J. Kim

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1. [KBI Group] Status

[KBI Group] was established with the name of [Shinhan Textile Company] in 1955 and has been expanding the business area into 6 industries "Automobile parts", "Steel & Copper materials", "Construction", "Medical care", "Environment & Energy" and "Textile & others". And the entire group annual turnover of 2019 is abt. 2.2 billion US dollars.

1) Automobile Parts Division

- a. [KBI Dongkook Ind. Co.,Ltd.] (Listed on KOSPI), (www.dongkook.net)
 - > Products ; Automobile Parts (Injection mold such as glove box, Air-duct, Nozzle and etc.)
 - > Overseas factory :
 - * [Yancheng Dongkook Auto Part Co.,Ltd.] in China(Yancheng)
 - * [KDK Automotive GmbH] in Germany, Czech, Spain
 - * [Dongkook Mexico S.A. De C.V.] in Mexico
- b. [KB AUTOTECH], (www.kbautotech.com)
 - > Products ; Thermal Controlling system such as airconditioning system, cooling module and heat exchanger for Bus, Truck, Train and Armored Vehicle
 - > Overseas factory ; India(Chakan & Pune),

2) Steel & Copper material Division

- a.** [KBI Alloy Co., Ltd.] (www.kbialloy.com)
 - > Products : Copper alloy Bar & coil for spot resistance welding industry and aircraft wire

- b.** [KBI Metal Co.,Ltd.] (Listed on KOSDAQ) (www.kbimetal.co.kr)
 - > Products: Copper Rod Wire (SCR, JCR) for electric & communication cable

- c.** [KBI Cosmolink Co.,Ltd.] (www.cosmolink.co.kr)
 - > Products: Power Cable, Lan cable, Special ability cable, TIW-M, Bus Duct
 - > Overseas factory : [KBI Cosmolink Vina Cable] in Vietnam

- d.** [Dong Yang Steel Pipe Co., Ltd.] (Listed on KOSPI) (www.dysp.co.kr)
 - > Products: Steel Pipes & Piles for water works, transporting oil & gas and construction

3) Construction Division

- a. [KBI Construction Co.,Ltd.] (www.kbconst.co.kr)
-> Item : civil engineering and construction, industrial and environmental facility construction.
- b. [KBI Jungmoo Industry]
-> Item ; Apartment, Road, Bridge and Harbor
- c. [KB Remicon LLC] (www.kbremicon.ae)
-> Producing Remicon in Dubai, U.A.E.

4) Medical Care Division

- a. [KB Noksan Hospital] (www.kbhospital.com)
-> Health care/general hospital
- b. [KB Jangyu Hospital]
-> Health care/general hospital
- c. [KB Gumi Hospital]
-> Medical Treatments ; Spinal & fractural Surgery, Woman's disease, Pediatrics, Neurosurgery, Health Examination

5) Environment & Energy Division

- a. [KBI Kookin Industry Co.,Ltd.] (www.kukin.co.kr)
-> Item : Industrial waste disposal
- b. [KBI TECH Co.,Ltd.] (www.ikbtech.com)
-> Item : Waste Reclamation, Incineration and steam supplying
- c. [Seokmun Energy] (www.smep.co.kr)
-> Item : Steam supply and Power Generation

6) Textile Division & Others

- a. [KB Synthetics Co.,Ltd.] (www.kbsyn.co.kr)
-> Item : Yarns and Fabrics
- b. [KBI Japan & Takanawa Property] located in Tokyo & Hukushima
-> Real Estate Biz and Golf Resorts in Japan

2. [KBI ALLOY Co., Ltd.] Status

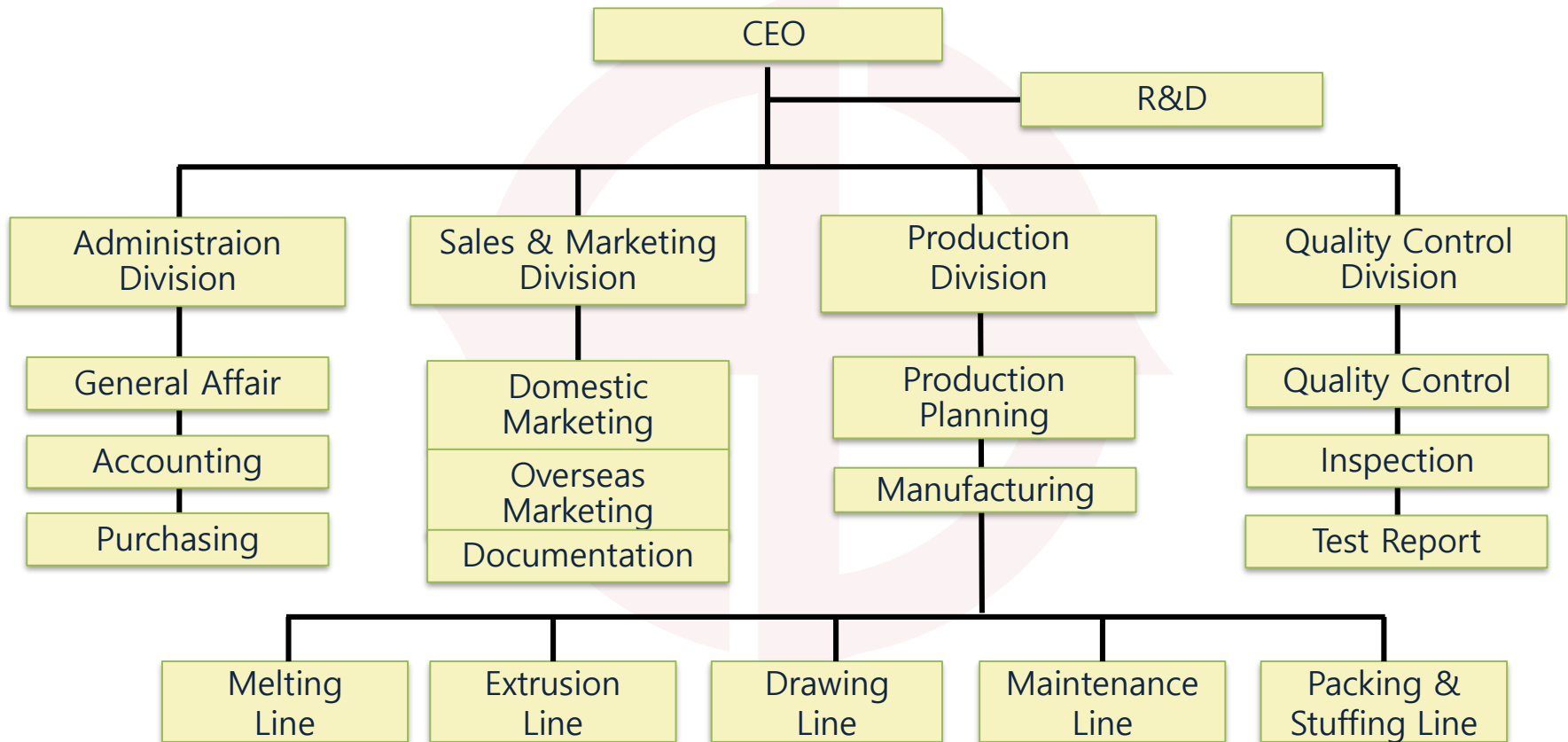
1) Company Overview

Company	KBI ALLOY Co., Ltd.	CEO	H. S. Park B. J. Kim
Business License Number	136 – 81 - 06923	Tel	041) 542-9711
		Fax	041) 543-7798
Type of Business	Manufacturing of Materials for Electricity , Electron, Electrode	Date of foundation Capital	July 01,1992 U\$14 million US dollar
Items	<ul style="list-style-type: none"> - Spot Resistance Welding Materials (Rod wire and bar) - Cap-Tip & Components of Welding Gun - Disk & Plate - Aircraft Wire & Co2-Tip Tube 	Location (Scale)	256, Namseong-gil, Asan City, Chungnam-do, 31529, South Korea - Land : 34,685m ² - Building: 9,205m ²

2) Company History

Year	History
1963. 03	Establishment of [Young Il Metal Company]
1992. 07	Converting [Young Il Non-ferrous Metals Co., Ltd.] into the corporation
1994. 12	[Jang Young Sil](IR52) Prize awarded by development of Electrode for organic coating steel plate (Ministry of Science and Technology)
1996. 02	[Superior Executive Prize] awarded(Ministry of Commerce, Industry and Energy)
1996. 08	Acquirement of [ISO 9002 Certificate]
2001. 02	Authentication of [Technology Renovation (INNO-BIZ) Company] (Small and Medium Business Administration)
2001. 08	Authentication of [Parts & Materials Developing Company] (Ministry of Commerce , Industry and Energy)
2001. 08	Authentication of [Venture Company]-[Research & Developing Company]
2003. 09	Acquirement of [Korea New Technology Certificate](KT Mark)
2008. 09	[Young Il] was acquired by [KB International Group] by friendly M & A
2011. 12	[US \$10 million Export Prize]Awarded (Korea International Trade Association)
2014. 12	[US \$20 million Export Prize]Awarded (Korea International Trade Association)
2016. 01	Changing the name of company from [Youngil Non Ferrous Metal Co., Ltd.] to [KBI ALLOY Co., Ltd.]
2016. 04	Establishment of R & D center for new technology
2016. 07	Selected as a Partner of Korea Institute of Industrial Technology
2019. 07	Selected as a Korea National Root Technology Company

3) Organization



3. Major Facilities

Name of Machine	Spec	EA
Medium Frequency Induction Electric Furnace	350kw, 0.5tons	2 set
	600kw, 1.5tons	1 set
	1,250kw, 2.0tons	2 sets
	2,500kw, 3.0tons	1 set
	2,500kw, 5.0tons	1 set
Centrifugal Casting Machine	50hp	2 sets
Durville Casting Machine	150kg	6 sets
Vertical Continuous Casting Machine	9m	2 sets
Electric Induct Billet Furnace	1,000kw	1 set
Indirect Extrusion Press	3,000tons	1 set
Eighth Stage Rolling Mill	Ø8 ~ Ø12	1 set
Draw Bench	75,000 hp, 100,000 hp, 200,000 hp	Each 1 set
Drawing Machine	Ø12, Ø20 Max	3 sets
Two Roll Straighter	Ø8 ~ Ø45	2 sets
Aging Heat Treating Furnace	Electric Type, 4tons Max	1 set
Solution Heat Treating Furnace	Electric Type, 5tons Max Gas Type, 4tons Max	2 sets 1 set
Metal Composition Analyzer, Oxygen Analyzer	Spectrometer	Each 1 set
Tensile Tester, Conductivity Measuring Machine Rockwell Hardness Tester		Each 1 set
Metallographic Microscope	20~200X Magnifications	2 set

4. Main Products

1) Rod Bar & Rod Wire for Spot Resistance Welding and Components of Electronic Equipment

a, Materials

CuCr1Zr (C18150), CuCr1 (C18200), CuZr (C15000),
CuNiSiCr (C18000), CuCo2Be (C17500), CuNi2Be (C17510),
CuBe2 (C17200)

b, Figure & Size

Round bar : $\varnothing 2 \sim 200$ mm diameter (through extruding or forging)

Hexagonal bar : 8 ~ 50mm (distance across flats)

Square bar : 10mm square ~ 100mm square

Rectangular bar : above 5mm of thickness

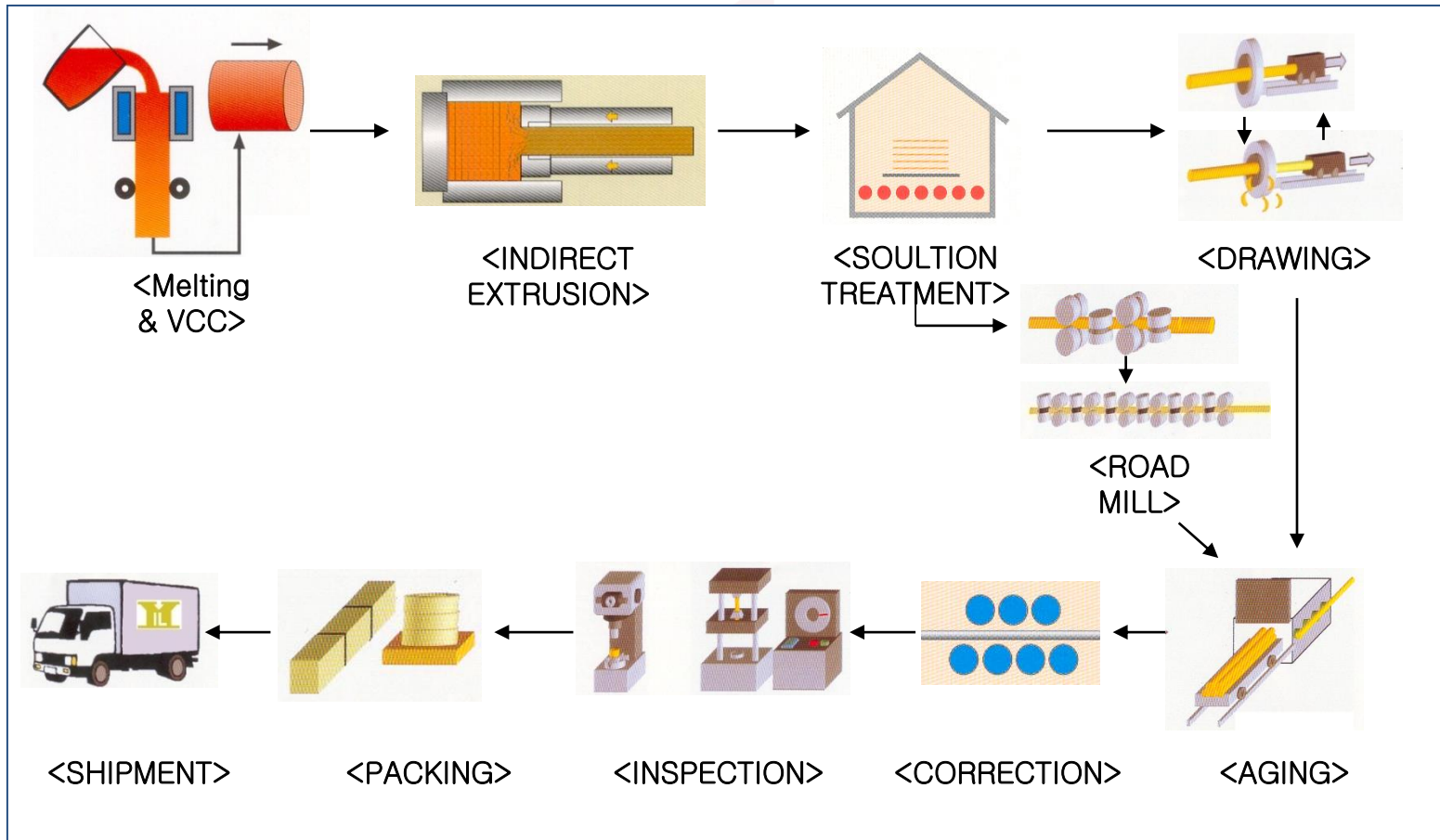
Deformed bar : according to the buyer's request

Coil : $\varnothing 2.0$ mm ~ 16 diameter (weight : abt. 120kgs/pc)

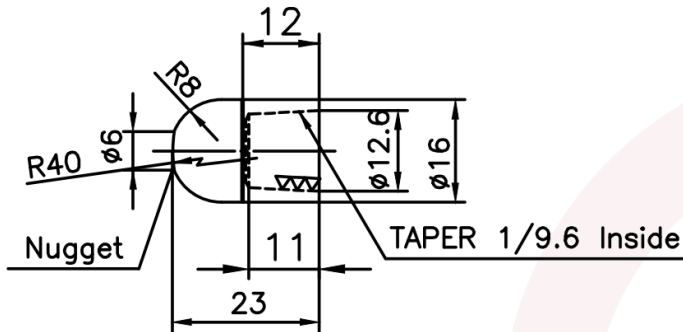
c, Applications

Cap-tip, Co₂-tip, Holder, Shank, Barrel, Wheel, End-ring,
Mold, Bushing and many kind of electrode components

d, Production Process



2) Cap Tip for Resistance Welding Gun for Car Industry <CuCr1Zr(C18150)/CuCr1 (C18200) /CuZr (C15000)>

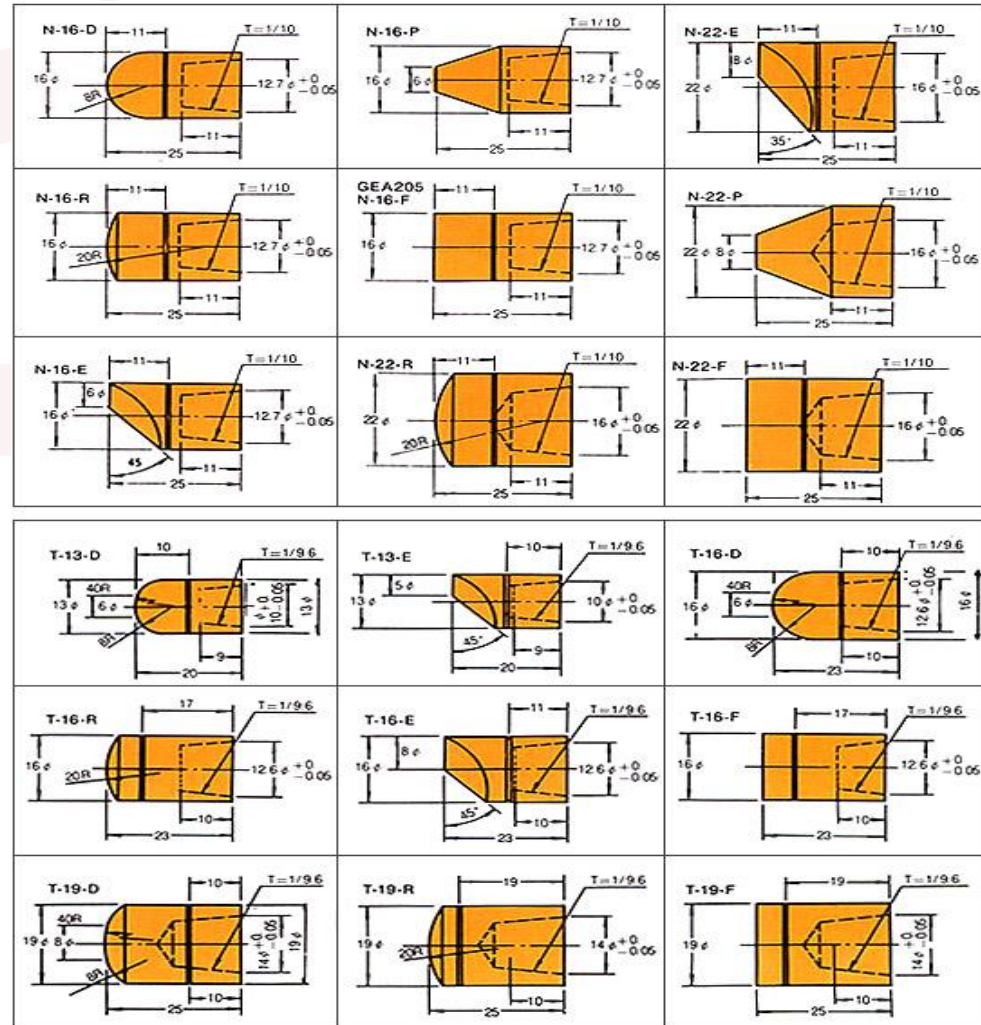


<Advantages of KBI Cap-tip>

- Head :
- Using our own raw material produced by special quality control.
 - No need pre-dressing before starting first weld. (forging and pre-dressing quality)
 - > Lifecycle will be 20% longer than other forging type Cap-Tip
 - (KB Cap-Tip lifecycle : 7,200~8,000 spots
 - Other Cap-Tip lifecycle : 5,500~6,000)

Nugget : Finished nugget part
-> maintaining clean surface and precise radius (R40)

Inside : Machined inside of Cap-Tip to make bite mark
-> Not easily fallen out while welding



3) Parts for Resistance Welding Gun

CuCr1Zr(C18150), CuCr1(C18200),
CuNiSiCr(C18000), CuCo2Be(C17500),
CuBe2(C17200), CuNi2Be(C17510)



Adaptor



Shank



Holder 1



Holder 2

4) Disk & Plate

a, Disk

- Material : CuCr1Zr(C18150), CuCr1(C18200), CuNiSiCr(C18000), CuCo2Be(C17500), CuNi2Be(C17510)
- Quality & Size

Type A

Material	Hardness (Min. HRB)	Diameter (mm)	Thickness (mm)
CuCrZr	75	80~350	8~35
	70	over 350~450	
CuCo2Be	90	80~450	8~35
CuNi2Be	90	80~450	8~35
CuNiSiCr	90	80~450	8~35

Dia. ϕ (mm)		Thickness(mm)	
80~100	(-0/+0.5)	8~16	(-0/+0.5)
over 100~300	(-0/+2.0)	Over 16~20	(-0/+1.0)
over 300~450	(-0/+3.0)	Over 20~25	(-0/+1.0)

- Machining Quality

Type B

Material	Hardness (Min. HRB)	Diameter (mm)	Thickness (mm)
CuCrZr	70	80~450	8~40
CuCo2Be	90	80~450	8~40
CuNi2Be	90	80~450	8~40
CuNiSiCr	90	80~450	8~40

Dia. ϕ (mm)		Thickness(mm)	
80~100	(-0/+3.0)	8~16	(-0/+1.0)
over 100~300	(-0/+3.0)	Over 16~20	(-0/+1.0)
over 300~450	(-0/+3.0)	Over 20~25	(-0/+1.0)

- Non-machining Quality

b, Plate

- Material : CuCr1Zr(C18150), CuCr1(C18200), CuNiSiCr(C18000), CuCo2Be(C17500), CuNi2Be(C17510)
- Quality & Size

Type A

Material	Hardness (Min. HRB)	THICKNESS (mm)	WIDTH (mm)	LENGTH (mm)	Weight (kg/pc)
CuCrZr	75	8~50	100~400	On request	Max. 250
	70	50.1~60			
CuCo2Be	90	16~60	100~400	On request	Max. 150
CuNi2Be	90	16~60	100~400	On request	Max. 150
CuNiSiCr	90	16~60	100~400	On request	Max. 250

Thickness Tolerance	8~16(T)	-0/+2.0mm	Width Tolerance	100~200	-0/+2.0mm
				200~300	-0/+4.0mm
				300~400	-0/+5.0mm

Type B

Material	Hardness (Min. HRB)	THICKNESS (mm)	WIDTH (mm)	LENGTH (mm)	Weight (kg/pc)
CuCrZr	70	8~50	100~500	On request	Max. 400
	65	50.1~60			
CuCo2Be	90	20~60	100~500	On request	Max. 150
CuNi2Be	90	20~60	100~500	On request	Max. 150
CuNiSiCr	90	20~60	100~500	On request	Max. 400

Thickness tolerance	6~16(T)	-0/+2.0mm	Width Tolerance	100~300	-0/+2.0mm
				300~500	-0/+5.0mm

C, Production Process

- Disk

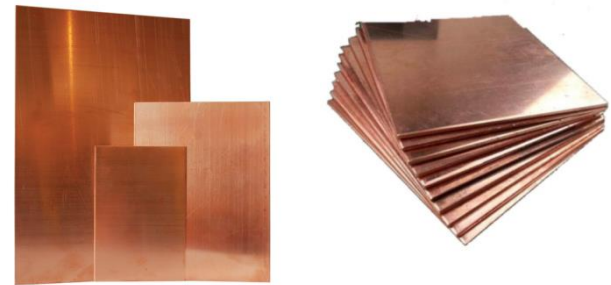
Billet -> Cutting -> Pre-heating -> Hot forging -> Solution heat treatment -> Cold forging (small size) or Cold rolling (big size ; to have uniform structure and physical properties in the whole cross section) -> Aging treatment -> pickling -> Machining

- Plate

Billet or slab(cake) -> Cutting -> Pre-heating -> Hot rolling (or Hot forging) -> Solution heat treatment -> Cold rolling (or Cold forging) -> Aging treatment -> pickling -> Machining (but. the plate of below 16mm of thickness will not be machined to prevent any warping or twist)



Disk



Plate

5. Sales Record

1) Sales Record by Country

	2017		2018		2019	
	QTY(ton)	Amount (Mill US\$)	QTY(ton)	Amount (Mill US\$)	QTY(ton)	Amount (Mill US\$)
Local	470	5	410	4	440	5
N. America	1,120	12	1,190	13	1,150	13
Germany	520	6	520	6	500	5
Other EU	260	3	240	3	340	5
etc	100	2	110	2	150	2
Total	2,470	28	2,470	28	2,580	30



Certificate

ISO 9001



Certificate No : RAQ1469

Certificate of Registration
QUALITY MANAGEMENT SYSTEM

This is to certify that
the quality management system of

KBI ALLOY Co.,Ltd.

at

#256, Namseong-gil, Asan-si, Chungnam, Korea

Has been found to conform to the Quality Management System Standards:

KS Q ISO 9001:2015/ISO 9001:2015

This Certificate is valid for the following product or service ranges:

*Production of Copper Rods, Copper Bus Bars, Copper Alloy Rods,
Copper Alloy Bars and Copper Alloy Bus Bars*

Issue Date : May. 22. 2019

Certification Date : Jun. 18. 2019


Valid Date : Jun. 17. 2022



Authorized By

E. J. Hwang
Eun Ju Hwang, President

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- KMR is accredited by the KAB (No. KAB-QC-17)
-  Mark indicates that KMR is Accredited by the member of the International Accreditation Forum Multilateral Recognition Arrangement.
- KSIC CODE:17/ Initial certification date: Jul. 14. 2004

Thank you



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