



OFC & COPPER ALLOY

High purity premium copper



THE WORLD BEST CABLE SOLUTION LEADER

LS Cable & System supplies various cables and materials used for power grids and communication networks around the world across all industries providing its top class technology and excellent quality. The company has also developed state of the art products, such as superconductors, HVDC and submarine cables that will lead the future energy industry.

LS spun off from LG in 2003 as a group specializing in electronics, electrical systems, energy and materials.



LS Cable & System

Transmission Cable
Distribution Cable
Submarine Cable
Telecommunication Cable
Industrial Cable
Industrial Material

LSELECTRIC

Electric &
Automatic Equipments

LS-Nikko Copper

Copper Refinement

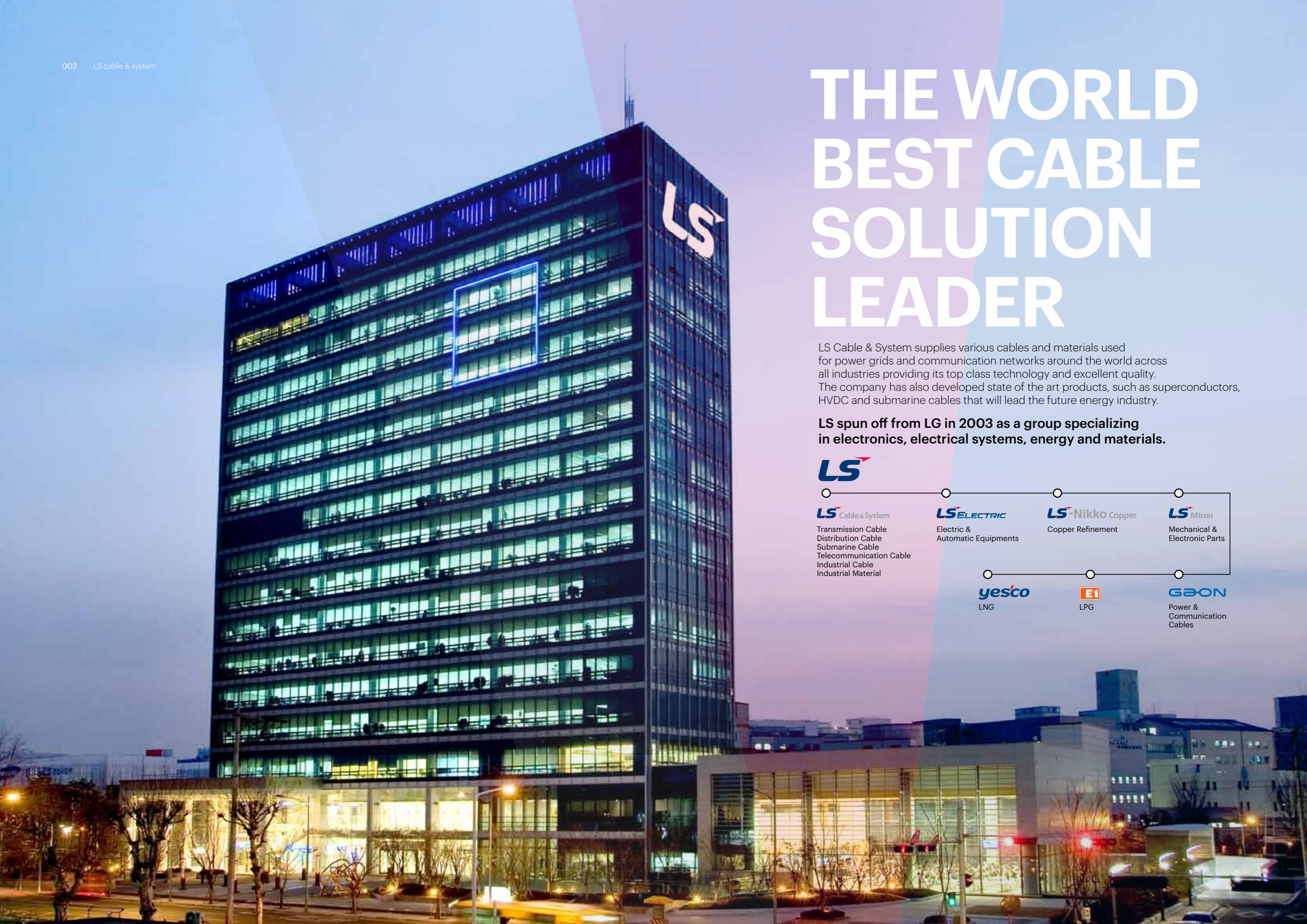
LS Mitron

Mechanical &
Electronic Parts

yesco
LNG

E1
LPG

GBON
Power &
Communication
Cables





OFC & Copper Alloy

OFC : Oxygen Free Copper

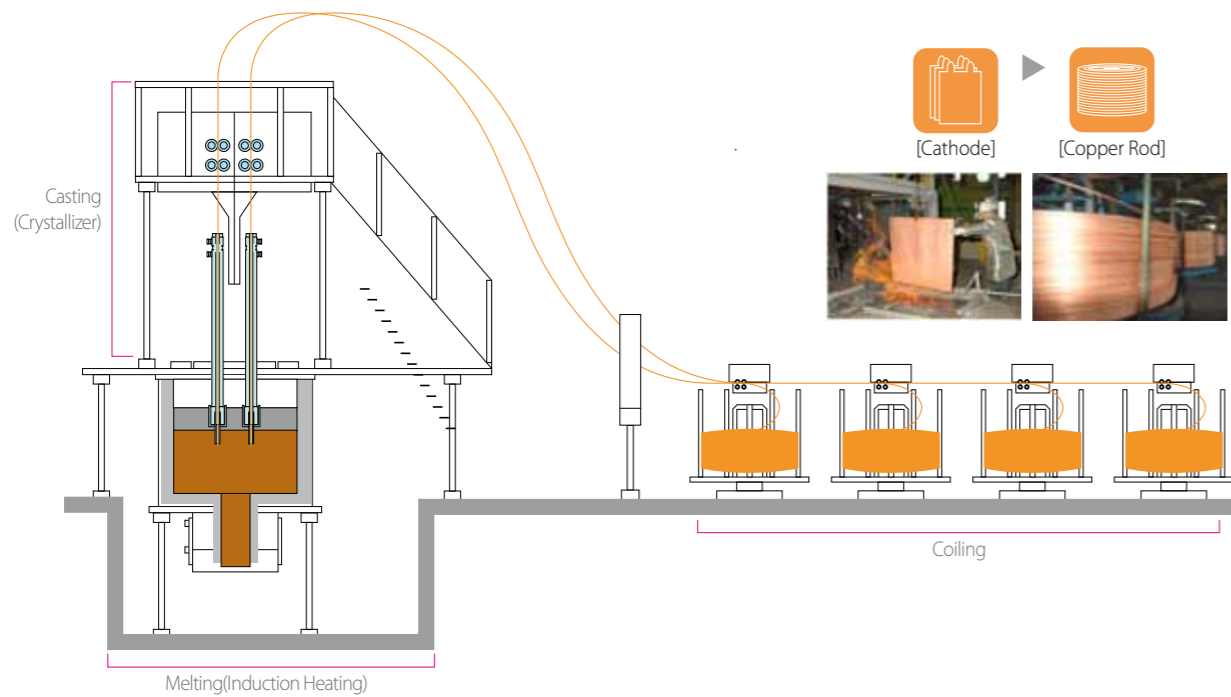
At the heart of the energy conversion system between electrical, electromagnetic, mechanical and other forms of energy, which system corresponds to the nerves and blood vessels of the electrical equipment and their properties, our products show high performance with great reliability. Our ceaseless effort to research, design, develop, and manufacture the products has been keeping our position as a leading company in customer satisfaction level in the industry.

The quality control meets the most delicate requirements of international standards and the high level of quality is recognized both by domestic and international customers. Our commitment to develop and deliver solutions to address our customers' needs and challenges keep our technology on the cutting edge and our know-how in the field more valuable, which our clients highly appreciate.

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Up-Ward Casting Process for OFC, Cu-Ag, Cu-Sn and Cu-Mg Alloy



Size

ø8.0mm	ø12.5mm	ø14.7mm	ø17mm
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Usage (Wire & Cable)

Magnet Wire	Automobile	Super-fine Wire	Audio Cable
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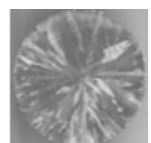
Information(Weight, Production Capacity)

- **Weight** Max. 4.5 metric tons / Pallet 20 metric ton / 20' Container
- **Production Capacity** 5,000 MT / Month
- **Installation** 2008

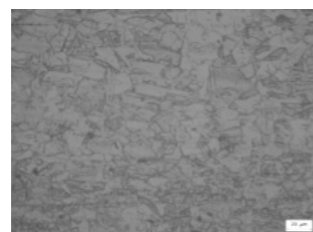
Product

- **OFC** Oxygen Free Copper(Oxygen Content : Max. 10ppm)
- **Cu-Sn Alloy : Max 1% Sn, Cu-Ag : Max 1% Ag, Cu-Mg : Max 1% Mg**

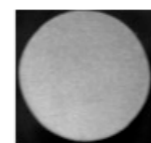
Microstructures of OFC & ETP Copper



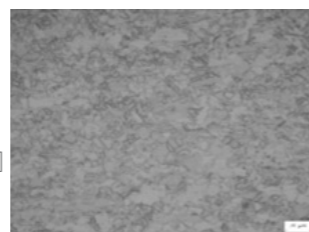
[As-Casting]



[OFC Wire]



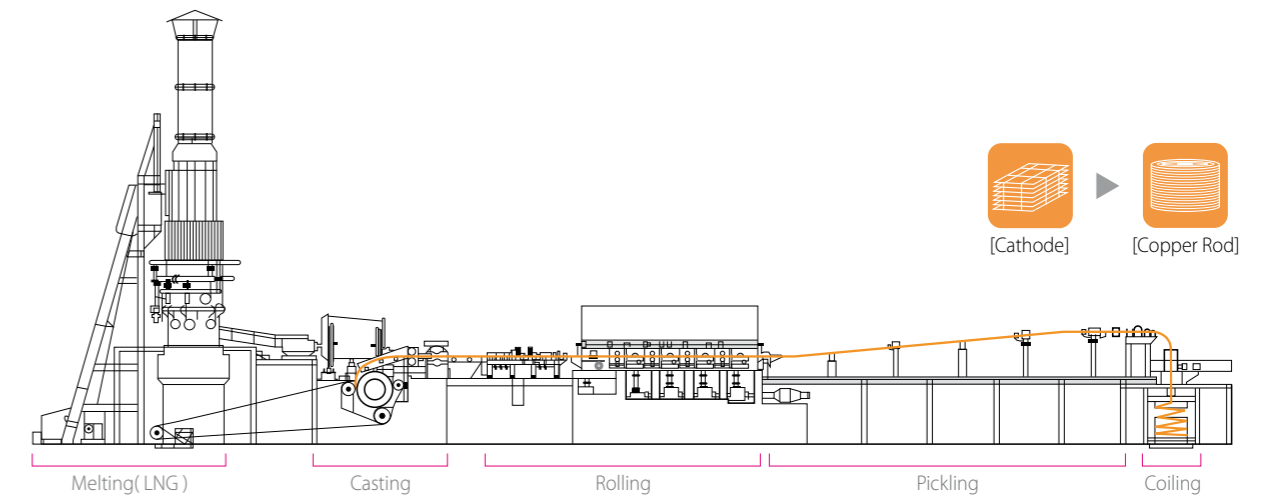
[Hot-deformation]



[ETP Copper Wire]

SCR Process for ETP Copper , Cu-Sn and Cu-Ag Alloy

"SCR" is the acronym of Southwire Continuous Rod system. Equipped with the Southwire Continuous Rod System, LS Copper Wire Rod are characterized **Low manufacturing cost and stable high-quality**



Size

ø8.0mm Rod
ø9.5, 12.7mm
ø18, 23mm

Usage (Wire & Cable)

Wire & Cable (Power, Communication, Magnet, Automobile)
Flat Wire
Trolley Wire

Information(Weight, Production Capacity)

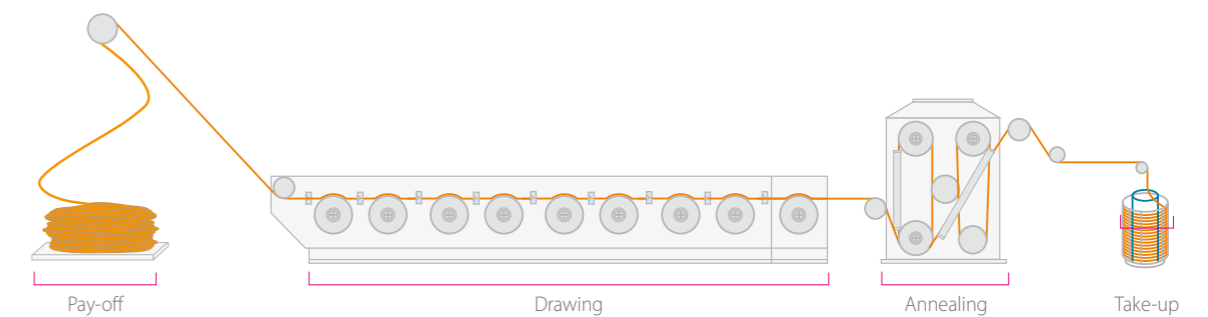
- **Weight** Max. 4.5 metric tons / Pallet 20 metric ton / 20' Container
- **Production Capacity** 40 MT / Hour, 900 MT / Day, 22,500 MT / Month
- **Installation** 1980

Product

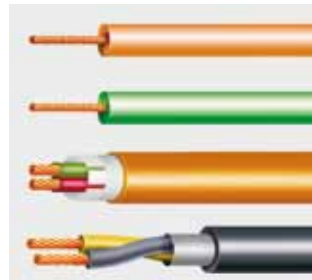
- **ETP Copper** Oxygen Content from 200 to 400 ppm
- **Cu-Sn Alloy : Sn Max 1%, Cu-Ag : Ag Max 1%**

Drawing Process

- **Introduction** : Making small diameter of wire from 6.8 & 8mm
- **Characteristics** : Low manufacturing cost and stable high-quality
- **Products** : Ø1.0mm ~ Ø2.6mm
- **Production capacity** : 12,000 MT / Month



LSC OFC & Copper Alloy Applied Products



[Automobile ABS Cable]



[Interconnect Ribbon Wire]



[Trolley & Messenger wire]



[Seat Heating Wire]



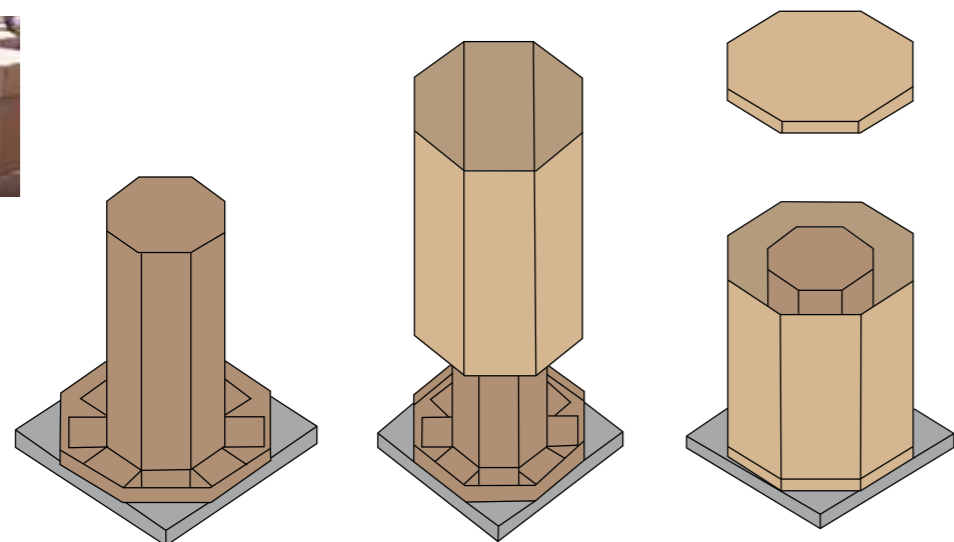
[LEAD Wire]



[Submarine Cable]

1.8mm/2.0mm Packing

- **Box Size** 900 x 900 x 980mm(H)
- **Type** Carton Box / Octagon
- **Net Weight** Max. 1,000 kg / BOX



Standard Specifications

Types of copper alloy wires

Alloy	UNS No.	Composition	Feature	Application
Cu-0.2%Sn	C14410	0.10 ~ 0.20%Sn	- High Tension/Bending Fatigue - Electrical Conductivity	- Conductor wire - Harness wire - ABS sensor cable - Robot cable - Medical equipment cable
	C14415	0.10 ~ 0.15%Sn		
Cu-0.3%Sn	C18835	0.15 ~ 0.55%Sn		
Cu-0.01%Ag	-	-	- Heat Resistance - High Electrical Conductivity	- Commutator - Condenser terminal - Heat Proof cable
Cu-0.03%Ag	-	-		
Cu-0.1%Ag	C12100	Min. 0.014%Ag		
Cu-0.2%Mg	C18661	0.1~0.7%Mg	- Excellent mechanical properties - Electrical conductivity - Green material(Cadmium-free)	- Conductor wire - Harness wire - Telecommunication cable - Terminal connector - Trolley/messenger wire
Cu-0.4%Mg	C18665	0.4~0.9%Mg		

Standard specifications of major product types(After Drawing)

Alloy	Size Range(Ømm)	Specifications			Tempers
		Tensile Strength (MPa)	Elongation (%)	Electrical Conductivity (%IACS)	
Cu-0.2%Sn	1.0 ~ 2.6mm	Min. 490	Min. 0.2	Min. 78	Hard Drawn
Cu-0.3%Sn		Min. 510	Min. 0.2	Min. 74	
Cu-0.01%Ag		Min. 390	Min. 0.2	Min. 95	
Cu-0.03%Ag		Min. 400	Min. 0.2	Min. 95	
Cu-0.1%Ag		Min. 412	Min. 0.2	Min. 95	
Cu-0.2%Mg		Min. 520	Min. 0.2	Min. 77	
Cu-0.4%Mg		Min. 610	Min. 0.2	Min. 62	

- Other alloy contents, sizes and tempers are available through consultation

Copper Alloy for Trolley wire(for Ø 18, Ø23 mm Rod)

LS Copper Alloy is designed to meet the specification of trolley wire as below

Alloy	Composition(%)	Nominal Cross Section (mm ²)	Specifications			Remark
			Tensile Strength (MPa)	Elongation (%)	Electrical Conductivity (%IACS)	
Cu-0.2%Sn	0.15~0.55%Sn	80	Min. 460	2.0 ~ 8.0	Min.72	BS EN 50149
		100	Min. 450			
		107	Min. 430			
		120	Min. 420			
		150	Min. 420			
Cu-0.1%Ag	0.08 ~ 0.12%Ag	80	Min. 365	3.0 ~ 10.0	Min.97	
		100	Min. 360			
		107	Min. 350			
		120	Min. 350			
		150	Min. 350			

GLOBAL NETWORK

More than 60 Factories,
Sales and Production Sites
in 20 Countries.

- Factory
- Sales office
- Branch office



KOREA



Gumi Plant
EHV / MV / LV cable
UTP, Coaxial cable
SCR, Magnet wire
Overhead cable, Bus duct



Indong Plant
Optical fiber
Optical cable



Donghae Plant
Submarine cable
Industrial specialty cable

CHINA



LSHQ(Yichang)
EHV / MV / LV cable
Industrial specialty cable



LSCW(Wuxi)
Industrial devices cable
Automotive cable
Harness & module
Aluminum, Bus duct

VIETNAM



LS-VINA(Haiphong)
EHV / MV / LV cable
SCR, ACSR
Overhead cable



LSCV(HO Chi Minh)
MV / LV cable
UTP, Optical cable
Overhead cable

INDIA



LSCI(Bawal)
EHV / MV / LV cable
Coaxial cable
Overhead cable

USA



LSCUS(Tarboro)
MV / LV cable
Control, Instrument cable

POLAND



LS EV Poland./LSCP (Dzierzoniow)
Automotive battery components
Optical cable



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