



AIMING TO BE THE CATALYST

Global Copper Pvt Ltd. is a part of RR Global, which is one of the leading conglomerates in the electrical and copper Industry. Observing the need of fast changing industrial environment comparing to the technological advancement in copper tube manufacturing in the neighboring countries like China, Malaysia & Vietnam having a great impact on domestic industry thus, we work with an aim of being the catalyst in this positive change. Powered by highly skilled professionals having a remarkable experience in copper sector, we manufacture from a highly advanced, fully automatic manufacturing unit equipped with a production capacity of 9600 MT/annum.



SINGLE SOURCE FOR CONSISTENT QUALITY AND RELIABLE SUPPLY

We at GCPL IMPEMENT Cast and Roll-the most advanced and state of the art technology to produce Level Wound Copper coils (LWC) and to fulfill the amplifying requirement for such products we also manufacture Pancake Copper Coils (PCC) and straight copper pipes. All our products are manufactured from fine class Electrolytic copper cathode of 99.9% purity.

CAST & ROLL – SUPERIOR TECHNOLOGY, SMARTER DEVELOPMENT

The cast and roll (C&R) technology consists of two main processes – Melting and Casting. Subsequent tube rolling. After casting the exterior surface of the shell, it is machined to remove scales and effects of oxidation where in no lubricants are utilized for the rolling process. The nitrogen gas environment in the cold working process involved in the manufacturing copper tubes protects the material even at high temperatures. Thus, the tube is bright from inside and outside which improves drawability and enhances the outcome of C&R Process.

We employ superlative equipment such as Planetary Rolling Machine, Cascade Drawing machine and Spin Block Drawers which are fully automatic, eliminating the possibilities of any human error.

PRODUCT FEATURES:

- Electrolytic Copper Cathode used as raw material.
- Soft-annealed, clean from inside and out. (Carbon Free)
- Online Eddy Current tested.
- Confirms to ASTM B68, B75, B280, B287 1-2, E243.
- CFC- Free – R134A, R600 & R410A and RoHS compliant.
- Controlled contamination levels.

WHY RR SHRMIK?

- Protection against Volatile LME/Forex fluctuations
- Diminished Lead time (Delivery within weeks of released Purchase Order)
- Enables buyers to source material on urgent requirements
- Zero Inventory costs
- Prompt shuffle of sizes.

SPECIFICATION CHART

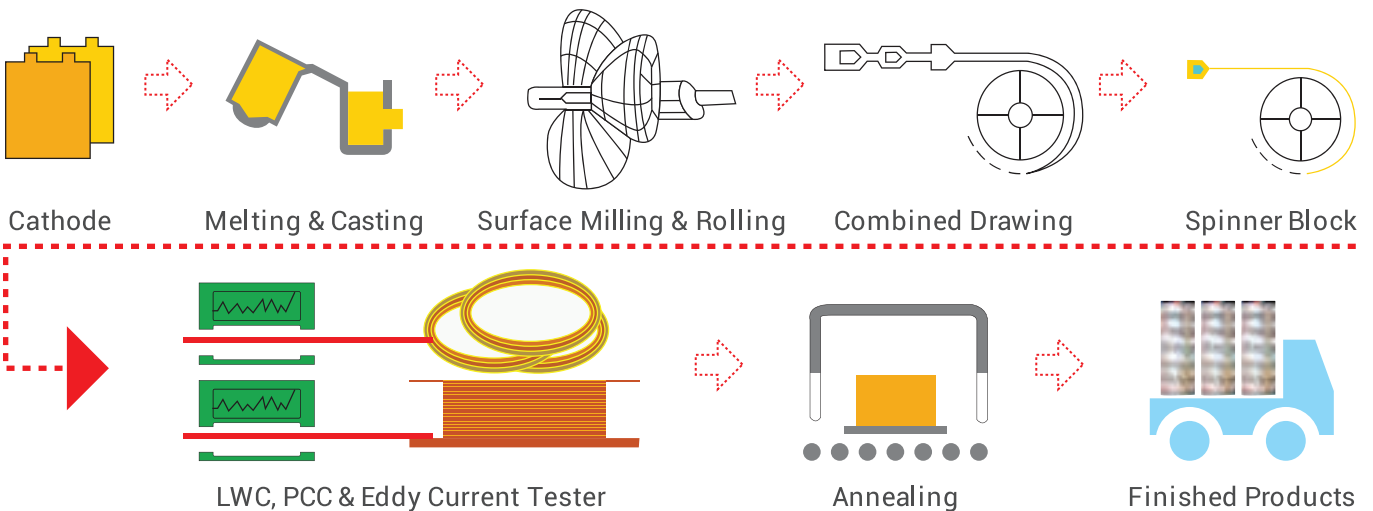
Standard	Standard Specification	Alloy No.	Copper (Cu)%	(P)%	Temper	Tensile Strength	%Elongation	Hardness	Average Grain size
ASTM	UNS	C12200	99.9	0.015 to 0.04	H58 O60	MIN 250 MIN 205	- MIN 40	- -	- MIN 0.04
	B68	C12200	99.9	0.015 to 0.04	O50 O60	MIN 210 MIN 210	MIN 40 MIN 40	- -	0.015-0.04 MIN 0.04
	B88	C12200	99.9	0.015 to 0.04	O50 O60 H58	MIN 205 MIN 205 MIN 250	- - -	50 HRF MAX 55 HRF MAX 30 HRF-30T	MIN 0.04 MIN 0.025 -
	B280	C12200	99.9	0.015 to 0.04	O60 H58	MIN 205 MIN 250	MIN 40 -	- -	- -
JIS	H3300	C1220	99.9	0.015 to 0.04	H OL O	MIN 315 MIN 205 MIN 205	- MIN 40 MIN 40	MIN 55HR MAX 55HRF MAX 50HRF	- MAX 0.04 0.025 - 0.06
BS EN	EN 1057	CW024A Cu-DHP	99.9	0.015 to 0.04	R220 (O) R290 (H)	MIN 220 MIN 290	MIN 40 MIN 3	40 - 70 HV5 MIN100HV5	- -

DETAIL	METRIC UNITS	ENGLISH UNITS
MATERIAL	Cu-DHP	Cu-DHP
DENSITY (AT 20° C)	8.9 g/cm ³	0.321 lb/in ³
MELTING POINT	1083°C	1981°F

QUALITY ASSURANCE PROCESS

DETECTION PROJECT	TESTING EQUIPMENTS
CHEMICAL COMPOSITION	SPECTROMETER
HARDNESS TESTING	VICKERS HARDNESS TESTER
TENSILE STRENGTH & ELONGATION TESTING	UTM (UNIVERSAL TENSILE TESTING MACHINE)
GRAIN SIZE TESTING	METALLURGICAL MICROSCOPE
NON DESTRUCTIVE TEST	
1. EDDY CURRENT TEST	ONLINE/OFFLINE EDY CURRENT
2. HYDROSTATIC TEST	HYDRAULIC TESTING MACHINE

PRODUCTION PROCESS OF COPPER TUBE



LEVEL WOUND COIL

Level Wound Coil is a coil of copper tubes in which turns are positioned into layers on a spool parallel to the axis of spool such that successive turns in a given layer are next to one another.



TEMPER

SOFT ANNEALED-060
LIGHT ANNEALED-050

SIZES AVAILABLE

Range: OD : 4.76 mm to 15.88 mm
Thickness: 0.31 mm to 1.5 mm

REFERENCE STANDARD:

ASTM B68
ASTM B75, ASTM B837, JIS H3300
BS EN 12735-1, BS EN 12735-2, EN 1057
IS 10773 copper tubes for AC & RF

SPECIFICATION CHART

OUTER DIAMETER		WALL THICKNESS (MM)											
MM	INCH	0.31	0.35	0.41	0.51	0.56	0.61	0.71	0.81	0.91	1.00	1.20	1.50
4.76	3/16"	✓	✓	✓	✓	✓	✓	✓	✓				
6.35	1/4"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7.94	5/16"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9.52	3/8"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12.70	1/2"		✓	✓	✓	✓	✓	✓	✓	✓	✓		
15.88	5/8"			✓	✓	✓	✓	✓	✓	✓			

APPLICATION

- VRV & VRF - Air Conditioning And Refrigeration Systems
- AHU's
- HVAC Industry
- Heat Exchangers
- Evaporator Coils
- Capillary Tube Drawing

PANCAKE COIL

Pancake coil in which the turns are wound into layers parallel to the axis of the coil such that successive turns in a given layer are next to one another: Also called Helical Coil) – Coils up to 100 ft.



TEMPER

SOFT ANNEALED-060

LIGHT ANNEALED-050

SIZES AVAILABLE

Range: OD : 4.76 mm to 22.22 mm

Thickness: 0.30 mm to 1.50 mm

Length: 50ft / 100ft

REFERENCE STANDARD:

ASTM B280 (Product Availability Specified As Per ASTM B743),

ASTM B68, ASTM B75, EN1057, JIS H3300

IS 10773 copper tubes for AC & RF

SPECIFICATION CHART

OUTER DIAMETER		PCC – 50FT – 100FT PANCAKE COILS															
		WALL THICKNESS (MM)															
MM	INCH	0.30	0.35	0.41	0.45	0.46	0.51	0.56	0.61	0.66	0.71	0.76	0.81	0.91	1.00	1.20	1.50
4.76	3/16"			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6.35	1/4"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7.94	5/16"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9.52	3/8"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
12.70	1/2"		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
15.88	5/8"				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19.05	3/4"										✓	✓	✓	✓	✓	✓	✓
22.22	7/8"										✓	✓	✓	✓	✓	✓	✓

APPLICATION

- VRV & VRF - Air Conditioning And Refrigeration System Field Service
 - HVAC – Servicing Industry
 - Connecting Kits For Indoor And Outdoor Units
 - Gas Piping
 - Civil & Industrial Piping For Air Conditioners
- *Sizes as per Customers Requirement can also be provided

STRAIGHT COPPER TUBE

Seamless Copper tubes have an availability in the form of straight cut lengths in soft/ hard temper having various application plumbing, heat exchangers, solar, medical gas piping etc



APPLICATION

- VRF and VRF - Air Conditioning and Refrigeration
- Heat Exchangers
- Chillers
- Solar Equipments
- Medical Gas Piping
- Electrical Heaters
- piping For Water Gas and Oil
- General Engineering Purpose
- Plumbing

TEMPER

SOFT ANNEALED O60
HALF HARD- H55
HARD – H58

SIZES AVAILABLE

Range: OD: 4.76 mm to 50 mm
Thickness: 0.41 mm to 2.00 mm
Length: 10 ft / 3.048 M

REFERENCE STANDARD

ASTM B280 (Product Availability Specified)
As Per ASTM B68, ASTM B75, EN1057, JIS H3300
IS 10773 Copper Tubes for AC & RF

COPPER TUBE (COILS STRAIGHT TUBE) – COATED WITH PVC

Seamless Copper tubes are available with PVC coating. Copper tubes are sheathed with polyvinyl chloride through continuous extrusion process to protect the tubes from external damages allowing it to be placed in tough environmental conditions.



CHEMICAL COMPOSITION:

Chemical Composition of copper tube shall be Copper + silver min 99.90% | Phosphorous min 0.015%.

PVC Coated and bare copper tubes in coils form and straight form

Size Range : Coil form: 6mm to 15.00mm

Coil form : 6mm to 15.00mm

Straight form : 15mm to 25mm

Length : Coil form: 15meter to 1000meter

Straight form : up to 3meter

PVC available in Black, Blue, White, Red, Yellow

REFERENCE STANDARD

ASTM B280, BS EN 1057

ASTM B88 : Seamless Copper Water Tube.

IS-10773 Copper Tubes for Ac & RF

PRODUCT APPLICATION AREAS



Plumbing



Solar



Sanitary



Natural Gas



LPG Cylinder

COPPER TUBE MEDICAL GAS PIPELINE SYSTEM

Seamless round copper tubes for medical gases or vacuum, material conforming to and manufactured as per BSEN: 13348:2001+A1: 2005 & ASTM B-819 Degreased copper tubes of this European & American Standard are suitable for distribution the following medical gases intended to be used at operating pressure Up to 1000 PSI and for system under vacuum.



TEMPER

R220 (ANNEALED)
R250 (HALF HARD)
R290 (HARD)

SIZES AVAILABLE

Range: 10mm O.D. to 50 MM O.D.
Thickness: 0.7 mm to 1.83 mm
Length: 10ft/3.048

REFERENCE STANDARD

ASTM B819
BSEN 13348
IS- 10773 Copper Tubes For Ac & RF

INSPECTION REQUIREMENT:

Chemical Composition: Chemical Composition of copper tube shall be copper + silver min 99.90% | Phosphorous min 0.015%. This copper grade is designated either CU-DHP or CW 024A

FEATURES

Low Residual level
Degreased copper tube & capped from both the ends
Superior mirror finished inner surface
100% online Eddy Current Tested

PRODUCT APPLICATION AREAS



Hospital



Clinics



Medical Collage



Laboratory

PATNERS IN PROGRESS

- Daikin India Pvt. Ltd.
- Lu-ve Group - Alfa Laval Pvt Ltd.
- Johnson Controls - Hitachi Air Conditioning India Ltd.
- Amber Enterprises Pvt Ltd
- Lloyds Air Conditioners
- Prijai Heat Exchangers Pvt. Ltd.
- Bluestar Limited
- Oxyplant India Pvt. Ltd.
- Voltas Limited
- Panasonic India Ltd



Ram Ratna House, Utopia City, P. B. Marg, Worli, Mumbai - 400 013.
T : +91-22-2494 9009 / 2492 4144 • F : +91-22-2491 0586 • E : indsales.sc@rrglobal.com

305/A, Windsor Plaza, R. C. Dutt Road, Alkapuri, Vadodara - 390 007 • E : vadodara@rrglobal.com

GLOBAL COPPER PVT. LTD. (Subsidiary of Ram Ratna Wires Ltd.)

Regd. Office : Survey no. 65/66, Village Garadiya, Jarod-Samlaya Road, Taluka - Savli, District Vadodara - 391 520.
M : 08511 095 731/ 08238 037 602 • E : sales@globalcopper.co.in

www.rrshramik.com • www.rrglobal.com