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WINDING WIRES

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ABOUT COMPANY

Raghupati Wires India Private Limited is a leading manufacturer of high-quality copper and aluminium winding wires, catering to diverse industries such as energy transmission, automotive, renewable energy, and e-mobility. With a commitment to precision engineering, innovation, and durability, we ensure our products meet the highest industry standards. Our expertise in wire technology allows us to offer reliable solutions that enhance efficiency and performance across various applications. Driven by excellence and customer satisfaction, we continue to set new benchmarks in the wire manufacturing sector.

SERVING TO THE WORLD GLOBALLY

“ INNOVATION, FLEXIBLITY & HIGHEST STANDARD OF INTEGRITY ARE THE HALLMARK OF OUR BUSINESS. ”

RAJENDRA AGARWAL
Managing Director
MBA (USA)

CORPORATE CULTURE
NOTHING IS IMPOSSIBLE IN THE WORLD.

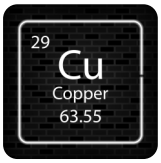
PRICE AND QUALITY WILL ALWAYS DRIVE THIS INDUSTRY, BUT WHEN YOUR CUSTOMERS LIKE DOING BUSINESS WITH YOU, IT TRULY SETS YOU APART.

OUR VISION

To be a globally recognized leader in wire manufacturing by delivering innovative, high-performance, and sustainable solutions that empower industries and drive technological advancements. We aspire to set industry benchmarks in quality, reliability, and efficiency while contributing to a greener and more connected future.

OUR MISSION

- To manufacture premium-quality winding wires that adhere to international safety and efficiency standards.
- To invest in research and development, driving innovation for enhanced product performance and longevity.
- To support industries with cutting-edge wire solutions that contribute to energy efficiency and sustainability.
- To uphold integrity, reliability, and customer-centric values in every aspect of our business.
- To expand our global footprint by consistently delivering superior products and fostering strong industry relationships.



COPPER FROM BEGINNING

Copper is a major metal and an essential element used by man. It is found in ore deposits around the world. It is also the oldest metal known to man and was first discovered and used about 10,000 years ago. And as alloyed in bronze (copper-tin alloy) about 3000 BC, was the first engineering material known to man.
Today, copper's uses have expanded to include heating, cooling and refrigeration, electrical wiring, electronics, power generation and transmission, automotive applications, antimicrobial uses and many more.

Exploration and Discovery : The element Copper is found in a variety of minerals in the earth's crust. Its uses are many. On the periodic chart of elements it is identified by the symbol "Cu".

Mining Methods : Copper ore is extracted using two basic methods of mining - open pit or underground mining.

Processing of Copper Ore : The first step in processing the ore removed from the mine is to break the large rocks of ore into smaller pieces. This is accomplished by a variety of subsequent processing steps.

Beautification of Copper Ore : The next step in processing is called beautification. This is the first step in concentrating the copper into a more usable form.

Smelting and Extraction : The next step in the process flow is smelting for sulfide ore concentrate and solvent extraction for oxide ore leach solution.

Refining : Copper from the smelter is melted and cast as anodes, the solution from the solvent extraction process moves to a plating operation.

Sulfide Ore Refining : Copper from the smelter is melted and cast as anodes, the solution from the solvent extraction process moves to a plating operation.

Copper Products & Many Uses : The final step in processing sulfide ore copper from the smelter is to make high purity copper cathodes.

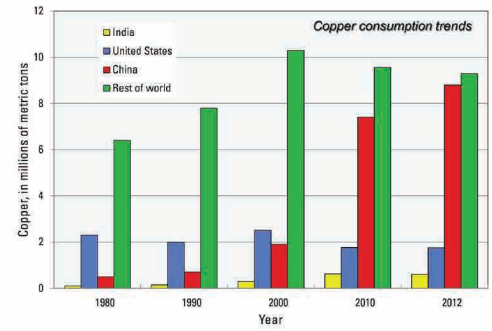
Uses of Copper : Copper has many uses because it is not only practical but also beautiful.

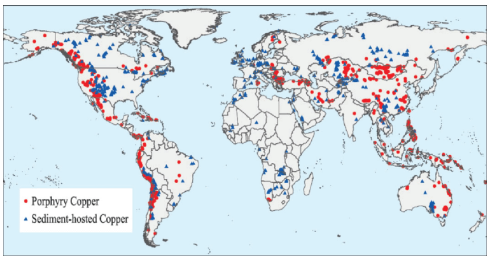
Marine & Other Applications : Copper and copper alloys are not only strong and durable, they are also very corrosion-resistant. This makes them ideal for use on ships and off-shore platforms.

Recycling and Reuse : The copper industry strives to be good stewards in the production and use of copper materials.

THE DEMAND FOR RENEWABLE ENERGY

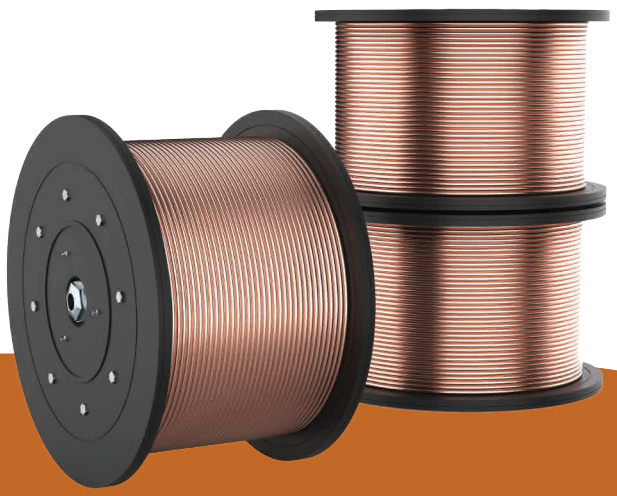
According to data provided by the U.S. Energy information Administration, electricity consumption has gone up and will continue to grow at 1 percent per year until 2035. As energy consumption grows, renewable energy technologies become even more valuable and necessary to meet demand and protect our environment.





The qualities of copper that have made it the material of choice for a variety of domestic, industrial, and high technology applications have resulted in a steady rise in global copper consumption. USGS studies of copper consumption show some interesting trends for the 1990 to 2012 time period. Copper consumption in emerging economies, such as China and India, rose considerably, whereas the consumption rate in the United States fell slightly. Until 2002, the United States was the leading copper consumer and annually used about 16 percent of total world refined copper (about 2.4 million tons).

In 2002, the United States was overtaken by China as the world's leading user of refined copper. The booming economy in China contributed to a quadrupling of its annual refined copper consumption during the 12 years from 2000 to 2012 Graph by USGS.



ADVANTAGES OF USING WIRES MADE OUT OF

ELECTROLYTIC COPPER

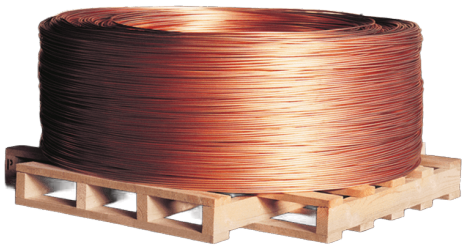
By using wires made out of Electrolytic Copper, in a power starved country like India, there will be considerable savings in electricity consumption.

Increased productivity due to reduction in downtime.

Energy cost saving makes an industry competitive.

Globally, Industries are relentlessly trying to manufacture equipments, which are energy efficient, safe and eco-friendly, and this can be achieved only by using standard quality input.

Some Electricity Boards in India are offering subsidy and/or supplying Electricity free of cost to the Farmers; these losses incurred by the Electricity Boards could be reduced to a considerable extent by saving Power.



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WINDING WIRES

COLORED COPPER WIRES

Colored Copper wire for jewellery making is one of the most enduring crafts, enjoyed by many throughout history. There is no doubt that colored copper wire is one of the most versatile and accessible materials that can be used in jewellery making. Colored Copper wire is loved by many artisans for its beautiful color, malleability, and affordability.

ROUND ENAMELLED COPPER WINDING WIRES FOR ELECTRICAL & ELECTRONICS

Enamel copper wire (also called magnet wire) is a copper wire coated with a thin insulation layer (typically enamel). We offer various enameled copper winding wires with excellent tensile strength, elongation, etc. These enameled coatings insulate and safeguard the wire from moisture and chemical exposure.

The most enameled coating types used in copper wire include those from thermal class 105 °C to 240 °C. These include polyvinyl acetal, modified polyester, polyester-imide, polyamide-imide, aromatic polyimide, polyurethane, corona resistance wire suited for different applications across the industrial world.

Each enamel coating offers unique benefits, making it suitable for different applications. These include general electrical use to more sophisticated industrial setups where heat, mechanical stress, and environmental factors prove critical.

The material is electrolytically refined copper and fully annealed to optimize the benefits of customization in hermetic applications, electrical motors, transformers, switchgear, consumer and industrial electronics, auto electrical, refrigerators, AC's, home appliances, windmills, generators, EV – motors, pumps, fans, etc

COVERING (GRADEWISE) OF COPPER WINDING WIRES.

NOMINAL CONDUCTOR DIAMETER		CONDUCTOR TOLERANCE	FINE COVERING GRADE - 1		MEDIUM COVERING GRADE - 2		THICK COVERNING GRADE - 3		CONDUCTOR RESISTANCE AT 20 c FOR 1 METER (OHMS)		
			MINIMUM INCREASE IN DIA	MAXIMUM OVERALL DIA	MINIMUM INCREASE IN DIA	MAXIMUM OVERALL DIA	MINIMUM INCREASE IN DIA	MAXIMUM OVERALL DIA			
SWG	MM	MM	MM	MM	MM	MM	MM	MM	NOMINAL	MAXIMUM	MINIMUM
8	4.064	0.041	0.049	4.155	0.092	4.201	0.138	4.245	0.001317	-	-
9	3.657	0.037	0.047	3.745	0.089	3.790	0.134	3.833	0.001627	-	-
10	3.251	0.033	0.046	3.336	0.086	3.380	0.130	3.422	0.002059	-	-
11	2.946	0.030	0.045	3.029	0.084	3.072	0.127	3.112	0.002508	-	-
12	2.642	0.027	0.043	2.772	0.081	2.764	0.123	2.783	0.003118	-	-
13	2.337	0.024	0.042	2.415	0.079	2.455	0.119	2.493	0.003985	-	-
14	2.032	0.020	0.041	2.108	0.077	2.147	0.116	2.184	0.005271	-	-
15	1.829	0.019	0.040	1.903	0.075	1.941	0.113	1.977	0.006506	-	-
16	1.626	0.017	0.039	1.698	0.073	1.735	0.110	1.770	0.008232	-	-
17	1.422	0.015	0.038	1.492	0.071	1.528	0.107	1.562	0.01076	-	-
18	1.219	0.013	0.035	1.285	0.067	1.318	0.100	1.350	0.01465	-	-
19	1.016	0.011	0.034	1.080	0.065	1.113	0.098	1.144	0.02108	-	-
20	0.914	0.010	0.034	0.976	0.063	1.008	0.095	1.038	0.02605	0.02686	0.02528
21	0.813	0.009	0.032	0.872	0.060	0.902	0.090	0.931	0.03293	0.03396	0.03194
22	0.711	0.008	0.030	0.766	0.056	0.795	0.085	0.822	0.04305	0.04442	0.04175
23	0.610	0.006	0.027	0.659	0.050	0.684	0.075	0.708	0.05848	0.06017	0.05687
24	0.559	0.006	0.025	0.605	0.047	0.629	0.071	0.652	0.06965	0.07178	0.06760
25	0.508	0.006	0.025	0.554	0.047	0.578	0.071	0.601	0.08434	0.08711	0.08168
26	0.457	0.005	0.024	0.501	0.045	0.523	0.067	0.544	0.1042	0.1075	0.1011
27	0.417	0.005	0.022	0.458	0.042	0.480	0.064	0.500	0.1252	0.1293	0.1212
28	0.376	0.005	0.021	0.417	0.040	0.435	0.060	0.454	0.1539	0.1595	0.1487
29	0.345	0.005	0.020	0.382	0.038	0.401	0.057	0.418	0.1829	0.1888	0.1772
30	0.315	0.004	0.019	0.349	0.035	0.367	0.053	0.384	0.2193	0.2269	0.2121
31	0.295	0.004	0.019	0.329	0.035	0.347	0.053	0.364	0.2501	0.2592	0.2414
32	0.274	0.004	0.018	0.306	0.033	0.323	0.050	0.339	0.2899	0.3011	0.2792
33	0.254	0.004	0.018	0.286	0.033	0.303	0.050	0.319	0.3374	0.3512	0.3242
34	0.234	0.004	0.017	0.265	0.032	0.281	0.048	0.296	0.3974	0.4149	0.3809
35	0.213	0.003	0.015	0.241	0.029	0.255	0.043	0.269	0.4798	0.4978	0.4625
36	0.193	0.003	0.014	0.219	0.027	0.232	0.039	0.245	0.5842	0.6081	0.5618
37	0.173	0.003	0.013	0.197	0.025	0.210	0.036	0.222	0.7271	0.7596	0.6967
38	0.152	0.003	0.012	0.174	0.023	0.186	0.033	0.197	0.9418	0.9888	0.8982
39	0.132	0.003	0.011	0.152	0.021	0.162	0.030	0.171	1.2496	1.3192	1.1841
40	0.122	0.003	0.010	0.141	0.019	0.151	0.028	0.160	1.4623	1.5502	1.3811
41	0.112	0.003	0.009	0.130	0.017	0.139	0.026	0.147	1.7354	1.8477	1.6318
42	0.102	0.003	0.009	0.119	0.017	0.128	0.026	0.136	2.0923	2.2398	1.9574
43	0.091	0.003	0.008	0.107	0.016	0.115	0.023	0.122	2.6298	2.8348	2.4423

VARIETIES OF COPPER WINDING WIRES

WIRE TYPE PROPERTIES	MODIFIED POLYSTER	MODIFIED POLYSTER	POLYESTERMIDE	DUAL COATED WIRE PE/PEI + PAI
THERMAL CLASS	130	155	180	200
CLASS INSULATION	B	F	H	H+
COLOUR	BROWN	LIGHT BROWN	DARK BROWN	REDDISH BROWN TO GOLDEN
RANGE	0.06 TO 5.00 MM	0.06 TO 5.00 MM	0.06 TO 5.00 MM	0.60 TO 4.00 MM
SPECIFICATIONS	IS 13730-34	IS 13730-3	IS 13730 - 8	IS 13730-13
TECHNICAL DATA	IEC 60317-34	IEC 60317-3	IEC 60317-8	IEC 60317-13
MECHANICAL TESTS:	FOR 1 MM WIRE	FOR 1 MM WIRE	FOR 1 MM WIRE	NEMA MW 35A/35C
FLEXIBLITY	1 X D	1 X D	1 X D	FOR 1 MM WIRE
PEEL	N X D = 150	N X D = 130	N X D = 110	1 X D
ABRASION AV.N	10.40	10.40	10.90	N X D = 110
HEAT SHOCK	6 X D 155° C - 30 MIN	2.24 X D 175° C - 30 MIN	2.24 X D 200° C - 30 MIN	11.3
CUT THROUGH	240° C - 2 MIN	240° C - 2 MIN	300° C - 2 MIN	2.24 X D 200° C - 30 MIN
SOLVENT RES.	GOOD	GOOD	VERY GOOD	320° C - 2 MIN
REFRIGERATION RES.	N.A	N.A	VERY GOOD	EXCELLENT
SOLDERABILITY	N.A.	N.A.	VERY GOOD	EXCELLENT
TRANSFORMER OIL RES.	N.A.	N.A.	N.A.	N.A.
ELECTRICAL RES.	N.A.	N.A.	EXCELLENT	EXCELLENT
BREAKDOWN VOL.	WITH IN RANGE	WITH IN RANGE	WITH IN RANGE	WITH IN RANGE
PINHOLES/ CONTD	ABOVE 8.00 K.V.	ABOVE 8.00 K.V	ABOVE 8.00 K.V.	ABOVE 8.00 K.V.
TENDENT DELTA	NORMALLY NIL	NORMALLY NIL	NORMALLY NIL	NORMALLY NIL
BENDING POINT	110 - 120	145 - 155	175 - 195	175 - 195

COATING WIRE APPLICATION OF COPPER WINDING WIRES

High Temperature **High Quality**

WIRE TYPE PROPERTIES	MODIFIED POLYSTER	MODIFIED POLYSTER	POLYSTERMIDE	DUAL COATED WIRES / PEJ + PAI
APPLICATION	Domestic equipments, pumps, motors, stabilizers, Transformers, Fans and Auto electrical requiring high mechanical properties.	General purpose rotating and static equipment like large pump motors, generators, air cooled transformers, voltage stabilizers, heavy duty domestic appliances like mixer-grinder, washing machines, where temp. is above class insulation B.	Continuously rated heavy duty motors and tools. Oil filed transformers. Hermetic grade for AC and Refrigerator compressor. Furnace motors and for all class H applications.	Special purpose machines like wind generators, large motors and generators, Extra heavy duty equipments like crane motors with heavy shock loads. AC and refrigerator compressor windings.
ADVANTAGES	Balanced thermal properties. Very good flexibility & mechanical properties.	High continuous operating temp. Good chemical stability. Excellent dry & Wet di- electric characteristics.	Good thermal properties. High resistance to overloads. Good transformer oil resistance. Suitable for hermetic applications	Excellent smooth surface compatible for high speed winding. Very high thermal & overload resistance.
PRECAUTIONS	Not suitable for oil filled transformers & hermatic motors.	Not suitable for oil filled transformers & hermatic motors.	Not recommended for high speed winding applications	Excellent for A/C refrigerators and hermatic use.

* These are only indicative values. Improvement is an ongoing process and efforts are made to exceed average value.

SUPER ENAMELLED ALUMINIUM WINDING WIRES.

The demand of aluminium magnet wires in many industrial applications has sky rocketed due to unprecedented increase in copper rates To cater this demand, We proudly declare the addition of super enameled aluminium magnet wires in the product armory. These are manufactured as per Indian as well International standards and as per the specifications given by the customers. The product is available in different sizes, types and grades of coverings to cater to specific needs for special fields of applications. The latest technology is adopted for manufacturing to offer high quality products.

Applications:

Aluminium is an excellent electrical conductor next to copper. The super enamelled aluminium wire can be used to replace the copper enamelled wires with proper design modifications. Mainly it is used in electronic circuits, television degaussing coils and so on for many more applications including washing machine motors, fans and AC compressors. These wires have same properties for the enamel film but differ for the conductor properties when compared with enamelled copper wires. Our products have very good elongation and smooth surface.

Guage Number:	SWG(in mm)	AWG(in mm)
8	4.064	3.264
9	3.658	2.906
10	3.251	2.588
11	2.946	2.305
12	2.642	2.053
13	2.337	1.828
14	2.032	1.628
15	1.829	1.45
16	1.626	1.291
17	1.422	1.15
18	1.219	1.023
19	1.016	0.911
20	0.914	0.811
21	0.813	0.723
22	0.711	0.643
23	0.61	0.573
24	0.559	0.51
25	0.508	0.454
26	0.457	0.404
27	0.417	0.36
28	0.376	0.321
29	0.345	0.287
30	0.315	0.254
31	0.295	0.226
32	0.274	0.203
33	0.254	0.18
34	0.234	0.16
35	0.213	0.008
36	0.193	0.127
37	0.173	0.114
38	0.152	0.102

RANGE OF SIZES & TYPES OF ALUMINIUM WINDING WIRE

Name	Thermal Class	IS Specification			Grade
		IS	IEC	NEMA	
Polyester	Class 130	IS-13730-Part-9	IEC-60317-9	—	Fine, Medium, Heavy
Modified Polyester	Class 155	IS 13730-24	IEC-60317-24	MW-24A	Fine, Medium, Heavy
Polyesterimide	Class 180	IS-13730-Part-15	IEC-60317-15	MW-76A	Fine, Medium, Heavy
Polyesterimide + amideimide/DC	Class 220	IS-13730-Part-25	IEC-60317-25	NEMA MW-35A / 73A (Hermetic)	Fine, Medium, Heavy
Self Solderable	Class 155,180	IS 13730-51	IEC-60317-51	MW-80A	Fine, Medium, Heavy

SUBMERSIBLE WINDING WIRE FOR COMPRESSORS & PUMPS.

The copper conductor is wrapped with thin polyester film and Biaxial Oriented Poly Propylene (BOPP) films. The most modern plant with sophisticated wrapping heads & in line continuous heat shrinkage furnace is installed to get uniform covering. A complete quality assurance testing by instruments covering all governing standards is available.

Application :
Used in submersible pumps motors of all sizes for Domestic and Industrial applications.

Size Range :
Diameter 0.40mm to 3.00mm

Packing :
Available in coil form with suitable length as per size, in polythene bag and packed in inner & outer corrugated boxes.

Special salient features :
Saves Energy - ETP grade high conductivity
Annealed copper used Less current leakage - No air gap between the films
Tear resistant - High mechanical strength - High tensile strength Each coil tested at 3500V
Heat shock test - At 150°C
Easy Winding - Resistance annealed copper and controlled OD Manufactured by ultra modern automatic plant as per IS 8783 (Part 4/ Sec. 3)

SPECIFICATIONS & PARAMETERS.

SUBMERSIBLE COPPER WINDING WIRES

Sr. No.	Nominal Conductor Diameter (mm)	Tolerance + / - (MM)	Nominal Resistance Ohms / KM at 20 degree C	Over All Diameter (mm)	Weight of Poly Wrapped (kg/km)	Elongation Minimum (%)
1	0.40	0.004	137.15	0.80	1.467	24
2	0.50	0.005	87.78	0.90	2.154	25
3	0.60	0.006	60.96	1.00	2.980	26
4	0.70	0.007	44.78	1.10	3.946	28
5	0.80	0.008	34.29	1.20	5.052	28
6	0.90	0.009	27.09	1.30	6.298	29
7	1.00	0.010	21.94	1.40	7.683	30
8	1.10	0.011	18.14	1.50	9.208	30
9	1.20	0.012	15.24	1.60	10.873	31
10	1.30	0.013	12.98	1.70	12.678	32
11	1.40	0.014	11.20	1.90	14.891	32
12	1.50	0.015	9.75	2.00	16.989	32
13	1.60	0.016	8.57	2.10	19.227	32
14	1.70	0.017	7.59	2.20	21.605	32
15	1.80	0.018	6.77	2.30	24.122	32
16	1.90	0.019	6.08	2.40	26.780	32
17	2.00	0.020	5.49	2.50	29.576	33
18	2.10	0.021	4.98	2.60	32.513	33
19	2.20	0.022	4.53	2.70	35.589	33
20	2.30	0.023	4.15	2.80	38.850	33
21	2.40	0.024	3.81	2.90	42.161	33
22	2.50	0.025	3.51	3.00	45.656	33
23	2.60	0.026	3.25	3.10	49.291	34
24	2.70	0.027	3.01	3.20	53.066	34
25	2.80	0.028	2.80	3.30	56.980	34
26	2.90	0.029	2.61	3.40	61.035	34
27	3.00	0.030	2.44	3.50	65.228	34

* These are indicative values, Improvement is an on going process at company and efforts are made to exceed average value.

ALL OUR PRODUCTS GO THROUGH ULTRA MODERN HIGH PRECISION TESTING FACILITIES

NAME OF THE TESTS	UNITS	INSTRUMENTS USED
SIZE (DIAMETERS)	MILLIMETER	MICROMETER
ELONGATION	PERCENTAGE	TENSILE TESTER
CONDUCTOR RESISTANCE	OHMS / KM	RESISTANCE METER
VOLUME RESISTIVITY	OHM - CM	MILLION MEGA METER
HIGH VOLTAGE TEST	KV	HIGH VOLTAGE TESTER
THERMAL AGEING	CHANGE IN ELONGATION & TENSILE	AGEING OVEN & TENSILE TESTER
SHRINKAGE TEST	PERCENT	CIRCULATION HOT AIR OVEN
WATER ABSORBTION	MG/CM2	VACCUM OVEN & PUMP DESECRATOR
HOT DEFORMATION	PERCENT	CIRCULATING HOT AIR OVEN
HEAT SHOCK TEST	NO SIGN OF CRACKS / SCALES / SEPRATION OF LAYERS	CIRCULATING HOT AIR OVEN & MANDRELS

BARE COPPER WIRES

Hard-Drawn Copper Wires
Medium Hard Copper Wires
Soft or Annealed Copper Wires

Bare solid copper widely used in submersible winding wires, super enameled winding wires, pvc insulated submersible winding wires, earthing, fashion jewellery, interiors, exteriors, personal accessories etc. apart from this Copper has many uses because it is not only practical but also beautiful. Copper wires are used for electric fitting and cable wires are made of copper only. They are also known as “Electrolyte Copper” they are used in subways, conduit, and transit systems both light and heavy. Copper wires have great advantages over other wires and are therefore used heavily in all types of electrical fittings all across the world.

Some of these properties of Copper make it best for electrical and other uses:

Heat Resistant:
Copper wires are heat resistant second in electric conductivity the first being silver. They can also handle a wide load of electricity and it is much easier to handle them. That is why large circuits and subways are made out of copper wires.

Malleability:
This is an important quality of copper wires as their malleability allows them to be shaped in any form easily. The wires takes any form that is required After all this is done, next is the manufacturing process in different steps.

Ductility:
This is another quality of copper wire which makes it even thinner than a strand of human hair that is why copper wires are preferred when it comes to headphones and other things in which thin wires are required.

Resistant to corrosion:
Copper wires are resistant to corrosion which makes their use even more preferable as in long term they would be easy to handle and use.

Energy Efficient:
Copper wires are energy efficient which clearly means that they are heavily used in manufacturing process as they give better results as compared to other wires.

MANUFACTURING FACILITIES

The core material is copper coated with a thin layer of a polyurethane, polyamide, or polyester etc. resin - the so called "enamel". We manufacture enamelled copper wire by world's top enamelling machines of MAG, SICME Italia impianti (Europe) and SYM & THM (China) with in-line wire drawing, annealing cum steam bath for better bonding of enamel on wire and non contact micrometer for accurate dimension.

Enamelled wire is wire (such as magnet wire) coated with a very thin insulating layer. It is used in applications such as winding electric motor coils, speakers and transformers. It is also used in the construction of electromagnets and inductors.

Enamelled wires are classified by their diameter (AWG number or SWG) or area (square millimetres), temperature class and insulation class. Enamelled wires are manufactured in both round and rectangular shapes.

Breakdown voltage depends on the thickness of the covering, which can be of 3 types: Grade 1, Grade 2 and Grade 3. Higher grades have thicker insulation and thus higher breakdown voltages. Temperature Rating refers to the maximum temperature the enamelled copper wire can withstand without degrading. This is a specific temperature value in degree Celsius (°C) that the copper magnet wire's insulation is guaranteed to withstand for a prolonged period.

Enamelled Wires plays a critical role in three areas of energy transformation.

Electrical to Electrical
Electrical to electrical transformation involves transformers, which are used to transfer power. Transformers are used for power generation by utility companies, for power voltage conversion, and in electrical controls in industrial and home uses.

Electrical to mechanical
Electrical to mechanical transfer is necessary for motorized appliances, automobiles, industrial machinery and residential and commercial HVAC systems. Magnet Wire is a key component in each of these applications.

Mechanical to Electrical
Mechanical to electrical transformation occurs when machine power is converted into electricity. This type of transformation includes generators, which turn mechanical power in to electrical energy through the use of magnet wire.

Besides its uses in energy transformation, magnet wire is vital to a wide range of communications applications. Magnet Wire is used in coils in products such as computers, telephones, cell phones, video games and televisions etc.

The below wire sizes are generally use for Home appliances 0.08 to 2.50 mm / Automobile industry 0.60 to 2.0 mm / Industrial 0.80 to 3.50 mm.

TESTING

Following parameters of testing are carried out :

- Dimension Test
- Electrical Resistance Test
- Elongation Test
- Springiness Test
- Flexibility & Adherence Test
- Heat Shock Test
- Cut through Test
- Solvent Test
- Breakdown Voltage
- Continuity of Insulation
- Temperature Index
- Abrasion resistance (Unidirectional)
- Tan Delta Bending Point
- Shrinkage Test
- High Voltage Test
- Insulation Resistance Test

COPPER WIRE APPLICATIONS

Compressors & Pumps
The pump industry consumes a large amount of winding wire and its strict demands and technical specifications have been met by us for many years.

Wind Power
Wind power (including grids and transformers) consumes a large amount of round and rectangular winding wire. A large wind turbine can contain more than 30 tons of winding wire, depending on the technical solution.

Small Transformers
Transformers are used for transforming energy and to convert power voltages. Copper wire is the primary material but aluminium is also used BALLAST TRANSFORMERS

Distribution Transformers
Distribution transformers are used to make the final voltage transformation before distributing power to the consumers. They can be found in many different sizes and use winding wire in both copper and aluminium.

Power Tools
Power tools depend heavily on round copper wire for power.

Solar Energy
Winding wire is used in solar panel inverters to convert the DC into AC and transform it to the correct primary voltage. It is also used in the pump motors for solar hot water systems.

Generators & Traction Motors

Trams and locomotives use specially designed traction motors, designed to meet high demands for mechanical and thermal stress, stops and accelerations and different climates. New types of winding wire and insulation material have been utilized to comply with these special demands. Exciting solutions for traction motors are now being developed for trolley (electrical) buses.

AC/DC Motors

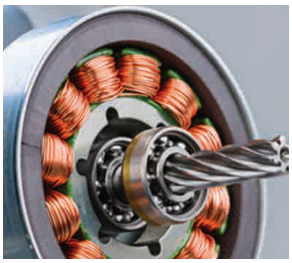
Since the late 19th century, AC and DC motors have been central to the winding wire business. DC motors can be found in small applications such as disk drives to very large ones for pump stations.

Home Appliances

Fans like Ceiling fans, Table fans, wall fans, Exhaust fans, Water Heater, Iron, Microwave, Music players ,Refrigerator, Air Conditioner, many other types of household appliances are all dependent on copper.

Electrical Accessories

All Kind of electrical Accessories are all dependent on copper.

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WINDING WIRES

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Enamelled Copper Winding wires
Aluminium Winding Wires
Colored Copper Wires
Submersible Winding Wires
Bare Copper Wires