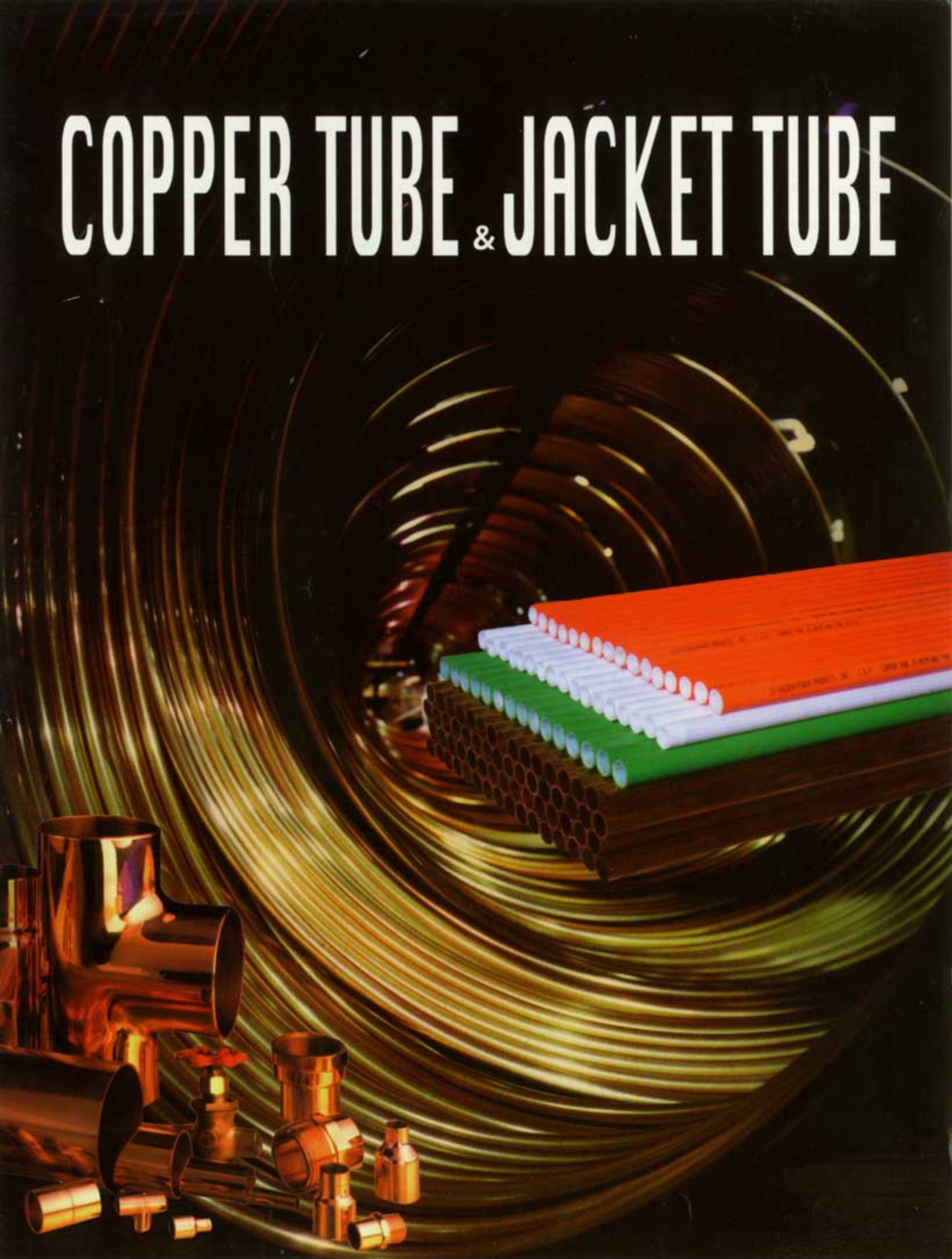


COPPER TUBE & JACKET TUBE



Cu G.P.
Cu Golden Power Products Inc.
COPPER SYSTEMS

銅管 · 被覆銅管

COPPER TUBE & JACKET TUBE

銅管·被覆銅管在歐洲、美洲、澳洲、日本、主要被廣泛用於住宅、大廈、公共工程、醫院、飯店...等建築物之給水、熱水管路材料；近年，在台灣隨著建築物的高品質化，銅管、被覆銅管迅速普及，全面性地被採用。除了運用於給水、熱水系統管材，銅管亦是瓦斯、消防、冷凍空調、排水系統的優良管材。

In Europe, America, Australia and Japan, the copper tubes and jacket tubes are widely used as the materials of water supply and hot water plumbing in residences, mansions, public utilities, hospitals and hotels. Recently, in Taiwan, the copper tubes and jacket tubes are adopted increasingly and rapidly owing to the trends of building high-quality architectures.

Besides the applications in plumbing system, copper tubes are also the excellent materials for the use of gas, fire fighting, refrigerating, air conditioning, and drainage system.

銅管可抑菌，確保給水衛生，建築給水銅管，依世界各國規範水中銅離子為1.0PPM以下，不僅對人體有益，且可發揮其抑菌功能。目前，除了銅管沒有其它任何管材有此作用。

Copper tubes can suppress the growing of bacteria to ensure the sanitation of supplied water.

As for the copper tubes used for water supply in architectures, according to the specifications of other foreign countries, the contents of copper ions in water should be below 1.0PPM. Under this condition, it is not only good for health, but also can bring the function of suppressing bacteria into full play. So far, no other materials can have this effect except copper tubes.

銅微量作用實驗（東京都立衛生研究所）以銅、鋁幣各一枚，置於一容器內，培菌繁殖，經24小時後，分析銅、鋁幣周圍及下方之細菌量。銅幣周圍細菌無法生存繁殖，鋁幣周圍細菌正常繁殖。

The experiment of the effects of small amount copper which was held by Tokyo Municipal Sanitation Research Center showed that: A copper coin and an aluminum coin were put into a container for the culture of bacteria. After 24 hours, scientists analyzed the bacteria amount on the rims of each coin and below each coin. It showed that the bacteria could not propagate on the rim of copper coin, while the bacteria could propagate on the rim of aluminum coin normally.

銅管富撓性，抗震性能佳，日本建築學會對美國舊金山大地震進行了現場調查發現，指出鋼性高鋼管之管路損害嚴重，而銅管基本上沒有受到損害。

Copper Tube is flexible and shockproof.

The Japan Architecture Association undertakes a scenic investigation of the earthquake in San Francisco of U.S.A. The report shows that the steel tubes are seriously damaged owing to its high stiffness, while the copper tubes are basically non-damaged in this accident.



銅是一種耐腐蝕性優異的金屬，在歐洲，人們發現早在2000年前就使用銅管，直至今日仍在繼續使用著，中國商、周時代的銅器，被現代人們發掘時，仍完好無缺，足證明銅之耐蝕性，依日本第一生命大樓使用實例分析，銅管使用年限在50年以上。

Copper Tube is erosion-resistant

Copper is a metal with excellent erosion-resistance. In Europe, it was found that people used copper tubes in 2000 years ago, and it is still widely used nowadays. When the copper utensils of Chinese Shang and Chou Dynasties were dug out, they are still complete and without any damages. It fully shows the excellent erosion-resistant characteristic of copper. According to the application example of the Japan Life Building, the lifetime of copper tube can exceed 50 years.



管内面スケール付著状況



同左スケール除去—酸洗後



マイクロ組織(×100)腐食深さ0.05mm



Seamless Copper Tube For Water, GAS AND Sanitation Chemical Composition (ASTM B88, JIS H3300, CNS 5127)

Element	% minimum	% maximum
Copper	99.90	--
Phosphorus	0.015	0.040

Plumbing Applications 水道系統専用 TYPE K, L, M, ASTM B88, JIS H3300, CNS 5127																
SIZE(in)	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	10"
OD(m/m)	9.52	12.7	15.88	19.05	22.22	28.58	34.92	41.28	53.98	66.68	79.38	104.78	130.18	155.58	206.38	257.18

Plumbing Applications 水道系統専用 TABLE X, Y, Z, BS2871, EN 1057													
SIZE(in)	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"
OD(m/m)	10	12	15	22	28	35	42	54	67	76.1	108	133	159

Cu G.P. JACKET TUBE 被覆銅管

型式 Type	被覆材料 Jacket Material 顏色 Color	用途 Applications	JACKET THICKNESS (m/m) 被覆厚度									
			1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"
 ※ TYPE A	PE 發泡被覆 橘色・白色	HOT WATER TUBE 熱水系統用	2.3 m/m -0.3 m/m	3.0 m/m ±0.5 m/m			3.5 m/m ±0.5 m/m					
 TYPE B	PE 氣槽被覆 橘色・白色	HOT WATER TUBE 熱水系統用	2.0 m/m	2.5 m/m		3.0 m/m						
 ※ TYPE C	PE 絕緣被覆 藍色・綠色	COLD WATER TUBE 冷水系統用	min. 0.8 m/m				min. 1.2 m/m					

※ TYPE A =S 單層被覆 =XR 發泡加厚・難燃
C =D 雙層被覆 =R 難燃處理

被覆銅管優點

The advantages of JACKET TUBE

1. 保溫性能良好，減少熱能損耗，避免磁磚、混凝土龜裂。

It has good capability of keeping temperature, thus it can reduce the lost of heat energy. With jacket tubes, the enamel tiles and concrete can get rid of cracks and damages.

2. 絕緣性能良好，避免不同金屬接觸，高低電位差產生電蝕。

It has good capability of insulation. It can prevent the occurrence of electrocorrosion when two different types of metals, which have potential differences, contact together.

3. 防止空氣中溫差，管路外表結露。

It can prevent the dew formed on the appearance of tubes owing to the temperature difference in the air.

4. 埋敷熱水管路，給予管路熱脹冷縮運動空間，維護管路系統完整性。

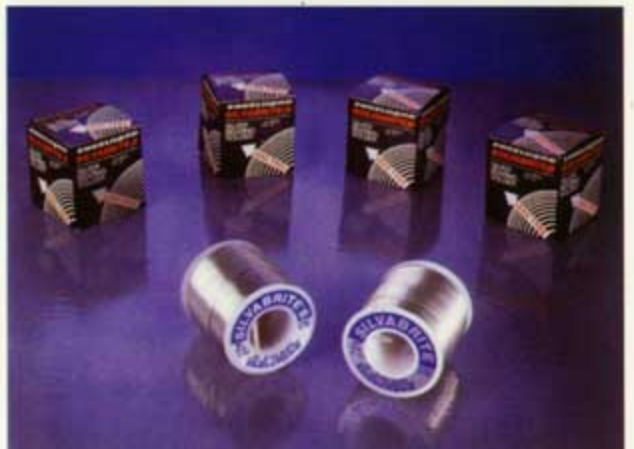
When digging in hot-water lines, the jacket tube can provide enough space for tube's expansion and shrinkage to the different temperatures to ensure the completeness of piping system.



給水專用焊材 (軟焊用) NSF認可，無鉛、無銅

Copper tubes welding material (Solder)

Soldering Alloy	Chemical Composition		Melting Range		Tensile Strength Copper Sleeve joint P.S.I.	Shear Strength P.S.I.	Color
	Silver	Tin	Solidus	Liquidus			
	Ag%	Sn%					
Silvabrite	4	96	430°F	430°F	14,000	10,600	Bruggt Silver non-oxidizing



給水專用焊材 (硬焊用)

Copper tubes welding material (Brazing)

Silvaloy	Chemical Composition			Melting Range			AWS Spec. A5.8 Class
	Silver	Phos.	Copper	Solidus	Flow Point	Liquidus	
	Ag%	P%	Cu%				
5	5	6	BAL	1190°F	1325°F	1495°F	BCuP ₅



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