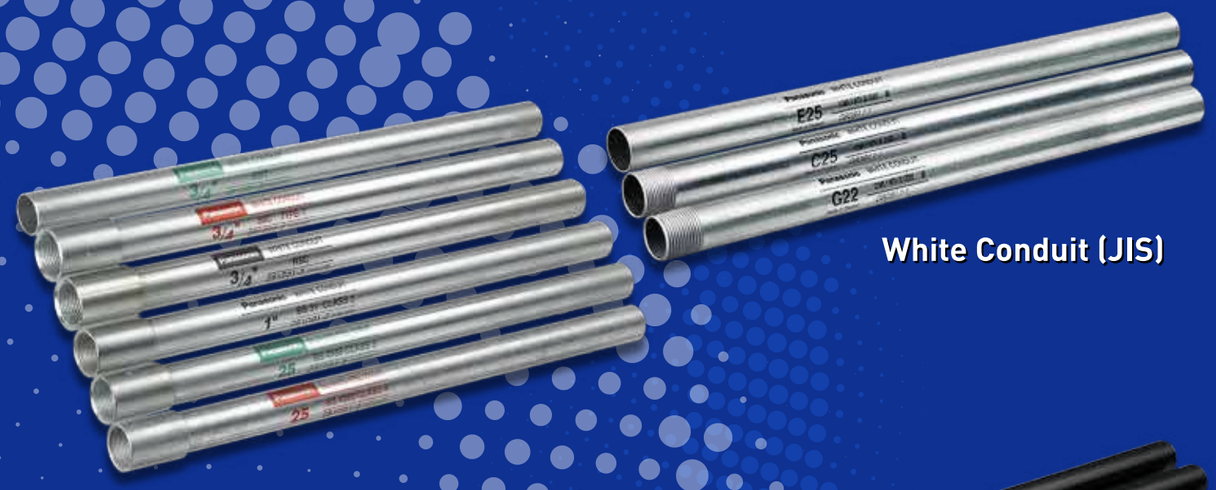
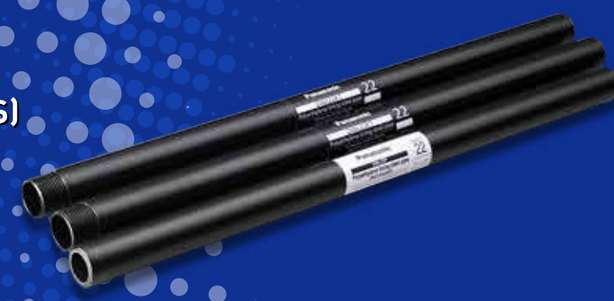
Panasonic

WHITE CONDUIT
POLYETHYLENE-LINING STEEL PIPE
STAINLESS STEEL CONDUIT PIPE

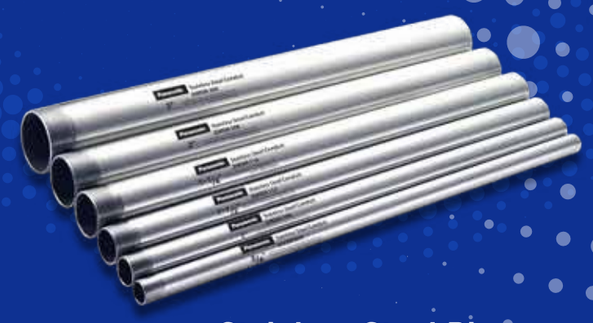


White Conduit (JIS)

White Conduit Pipe and Fittings (UL, BS)



Polyethylene-Lining Steel Pipe



Stainless Steel Pipe

Certificate No. TH98/4954

Certificate No. TH99/6248

Please contact:

Panasonic

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Panasonic Corporation Life Solutions Company

■ 03/20-3-1K/A

Certificates

ISO 9001 & ISO 14001

Certificate No. TH98/4954

Certificate No. TH99/6248

Certification Acquired Worldwide

UL 797 (EMT)

UL 1242 (IMC)

UL 6 (RSC)

UL 1 (FLEXIBLE METAL CONDUIT)

UL 514B (UL Fittings)

TIS770 (EMT/IMC/RSC)

Compliances

BS31

BS4568 CLASS4

BS4568 CLASS3

KS C8401 (E&G Conduit)

Sales

We are proud of our sales records both in Thailand and export to overseas to South-East and North-East Asia, Middle East, Africa, Europe, and USA

Panasonic SPT (Thailand) Co., Ltd.

Outstanding Features of Panasonic White Conduit

Superior galvanizing by in-line hot-dip process for greater protection against corrosion. Finished with durable and clear anti-corrosion coating for higher protection outside and higher grade epoxy coating inside.

Features

1) Easy and accurate bending

Panasonic White Conduit is made of high quality steel and processed by high frequency induction welding to prevent cracking when bend.

2) Easy wire pushing and pulling

The high-grade stoved epoxy resin coating on the inside wall makes wire-pulling easy, and protects against corrosion.

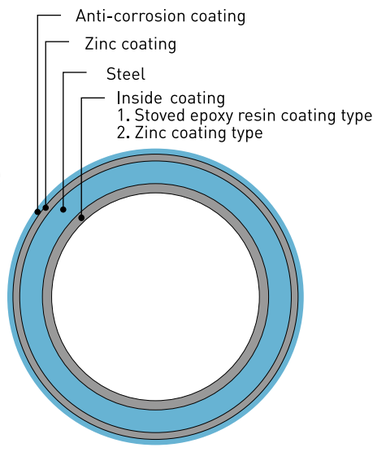
3) Easy coupling and fast installation

Precise, sharp threads cut by automated machinery means fast and easy installation. Precise thread also makes our conduit virtually moisture-tight.

4) High corrosion resistance

Pure zinc coating on the exterior wall and stoved epoxy resin finish on the inside protects WHITE CONDUIT from corrosion, even by harsh chemicals and sea air.

CROSS-SECTIONAL VIEW OF Panasonic WHITE CONDUIT



5) Uniform quality

Flat steel is rolled, zinc-coated and threaded in one continuous automated process for uniform high quality.

Standards

Panasonic WHITE CONCUIT is available in five types conforming to the following standard:
*UL/ANSI (EMT, IMC and RSC)
*BS (BS31-1940 and BS4568-1970)
*TIS770
*JIS (Plain, Thin Wall and Thick Wall)
*KS (Plain and Thick Wall)

Underwriters Laboratories Inc.®

THAI INDUSTRIAL STANDARD

KOREA STANDARD

Flow Chart of Manufacturing Process

1) Uncoiling
High quality strip steel coils are uncoiled and sent to the forming mills.

2) Coil-end welding
Both ends of the coils are welded to form a single strip.

3) Temporary coil-storing
Strip steel is stored here temporarily for coil end welding without stopping the main line.

4) Cleaning
All surface scale and oil on the strip steel are removed to assure accurate forming and regid welding.

5) Forming
The flat strip steel is rolled into basic tubing.

6) Welding
Basic tubes are welded by a high frequency induction welder. This type of welding assures rigidity, splitting-resistance and effectively eliminates inside flash.

7) Inside coating
The inside wall of the conduit is coated with epoxy resin.

8) Cleaning
All surface scale and oil are removed from the tubing before galvanizing.

9) In-line Hot-Dip Galvanizing
The exterior of the tubing is uniformly and rigidly galvanized by a patented in-line hot-dip process.

10) Cooling
The heated galvanized tubing is cooled.

11) Sizing
The cooled, galvanized tubing is rolled to precise outside diameters in accordance with customer specifications.

12) Anti-corrosion coating
For protection in addition to zinc coating, the gaivanized surface is finished with a clear anticorrosion coating.

13) Cutting
Tubing is square-cut to the specified lengths.

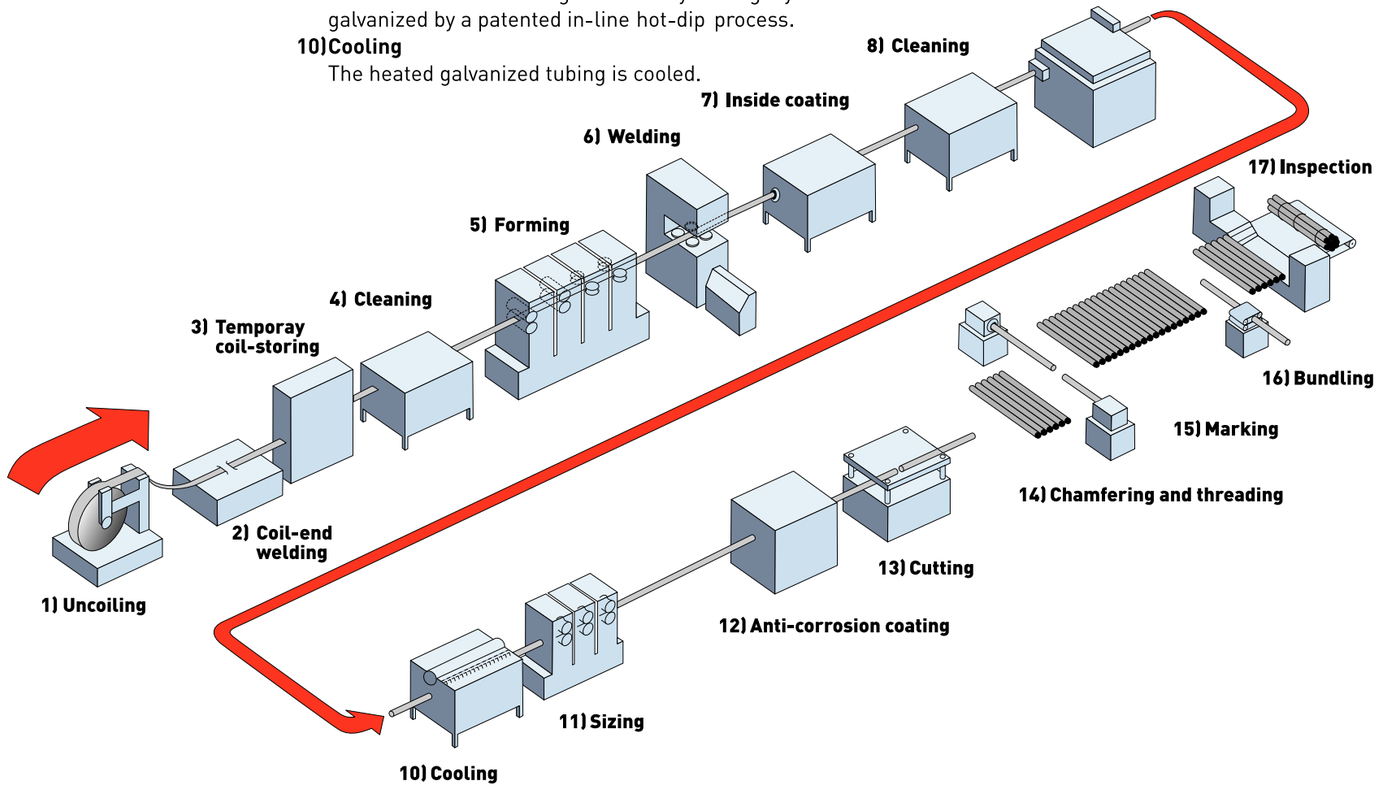
14) Chamfering and threading
Both ends of the cut conduit are chamfered and threaded to precise tolerance.

15) Marking
Brand name, size, standards, production codes, etc. are marked on the conduit.

16) Bundling
Finished conduit is steel strapped into approximately one metric ton bundle.

17) Inspection
At all steps of production, strict quality control is enforced. Unless customer specifies UL, or other certificates, all conduit is inspected according to factory specifications.

9) In-line Hot-Dip Galvanizing

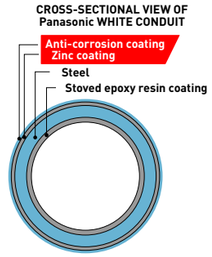


Outstanding Quality of Panasonic

EMT,BS4568 CLASS 3 Conduit

1. Superb OUTSIDE Surface!

2 Layers Coating Technology by Panasonic



• Copper sulphate

Outside coating : Coated with zink by in-line galvanizing process which makes our coating better. Moreover, we have final anti-corrosion coating for additional protection.

OUTSIDE SURFACE
Zn (inline hotdip)

Test Std : UL797 Clause 6.2.2 (Protective Zinc coating)
Criteria : Product passes if they do not show a bright adherent deposit of copper after four 60 seconds immersions in the copper sulphate solution.

0 cycle	1 cycle	2 cycle	3 cycle	4 cycle
	Pass	Pass	Pass	Pass

OUTSIDE SURFACE
Zn (inline hotdip)

Test Std : BS4568 ClauseA.3.3 (Protective Zinc coating)
Criteria : Product pass if they do not show a bright adherent deposit of copper after four 60 second immersions in the copper sulphate solutions.
Result : **No formation of red rust.** (Superior resistance to corrosion)

CUSO, Test (Cleaning additional coating before test)		0 cycle	1 cycle	2 cycle	3 cycle	4 cycle
	Outside					

Result : Fully confirm to the above requirement of UL

• Salt spray test

Method : It involves spraying of salt solution on the sample being tested inside a temperature controlled chamber.
Duration : 480 hours or more.
Result : No formation of red rust. (Superior resistance to corossion)

96 hours	168 hours	240 hours	336 hours	408 hours	480 hours
Result White Rust 30%	Result White Rust 80%	Result White Rust 90%	Result White Rust 100%	Result White Rust 100%	Result White Rust 100%

Under testing corrosion will appear as - White rust & Red rust

White rust
It is the formation of zinc oxide and looks like white powder on top of Zinc plated steel. The good thing about it is that this form of rust is not affecting the base material. It does not indicate serious degradation of zinc coating nor does necessarily it imply any likely reduction in the expected life of the product

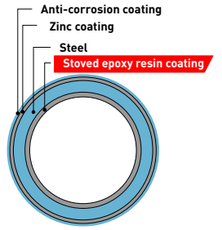
White rust

Red rust
It is caused by the corrosion of steel substrate where zinc coating has broken down completely. The most important thing about red rust is that this form of rust is affecting the base material resulting in the degradation of material .

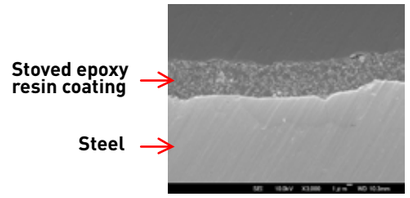
Red rust

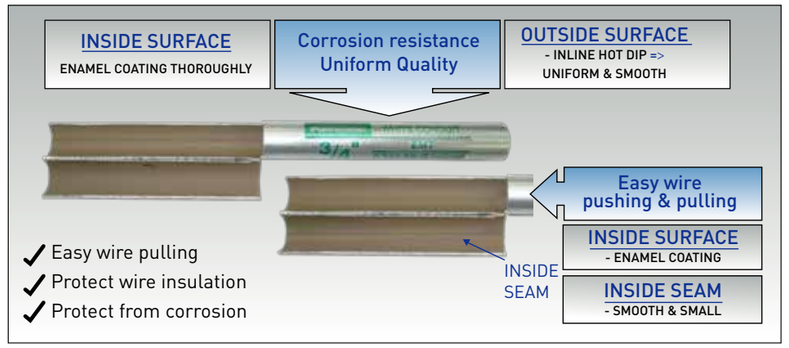
2. Superb INSIDE Surface!

Rust Proof & Smooth Seam! Special Coating Technology by Panasonic



Inline method
Dense and uniform coating film

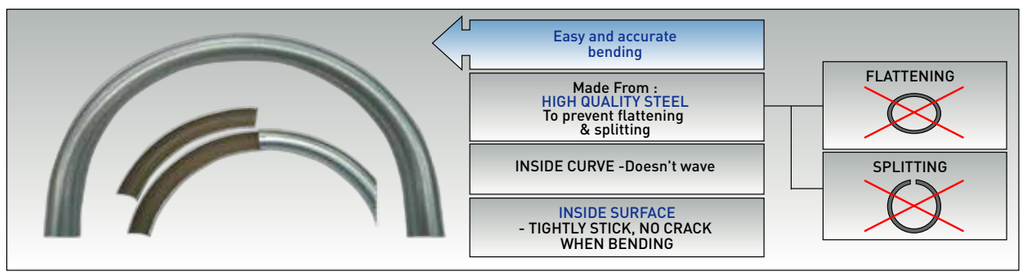




3. Superb Bending!

Smoothly and No Damage in Any Bending Angle! Exclusive Material & Process by Panasonic

By the use of high quality manufacturing and high quality steel Panasonic conduit can bend smoothly and there is no damage in any bending angle.



Panasonic conduits are manufactured from high quality steel & processed by high frequency induction welding therefore the finished tube in uniform in OD, wall thickness & ductility.

White Conduit & Conduit Fittings

ANSI/UL

EMT (Electrical Metallic Tubing)

Listed by "UL" File No. E-44051

UL 797

Item No.	Size (inch)	Outside diameter (mm)	Target Wall Thickness (mm)	Length (mm)	Target Weight (Kg/Pc)	Primary Bundle (Pcs)	Master Bundle (Pcs)
DWE012Y	1/2	17.93	1.04	3,048	1.32	10	500
DWE034Y	3/4	23.42	1.20	3,048	2.01	10	300
DWE100Y	1	29.54	1.39	3,048	2.94	5	200
DWE114Y	1-1/4	38.35	1.59	3,048	4.40	5	125
DWE112Y	1-1/2	44.20	1.59	3,048	5.10	5	100
DWE200Y	2	55.80	1.59	3,048	6.49	3	75
DWE212Y	2-1/2	73.03	1.74	3,048	9.33	-	40
DWE300Y	3	88.90	1.74	3,048	11.41	-	30
DWE312Y	3-1/2	101.60	1.97	3,048	14.77	-	20
DWE400Y	4	114.30	1.99	3,048	16.82	-	20