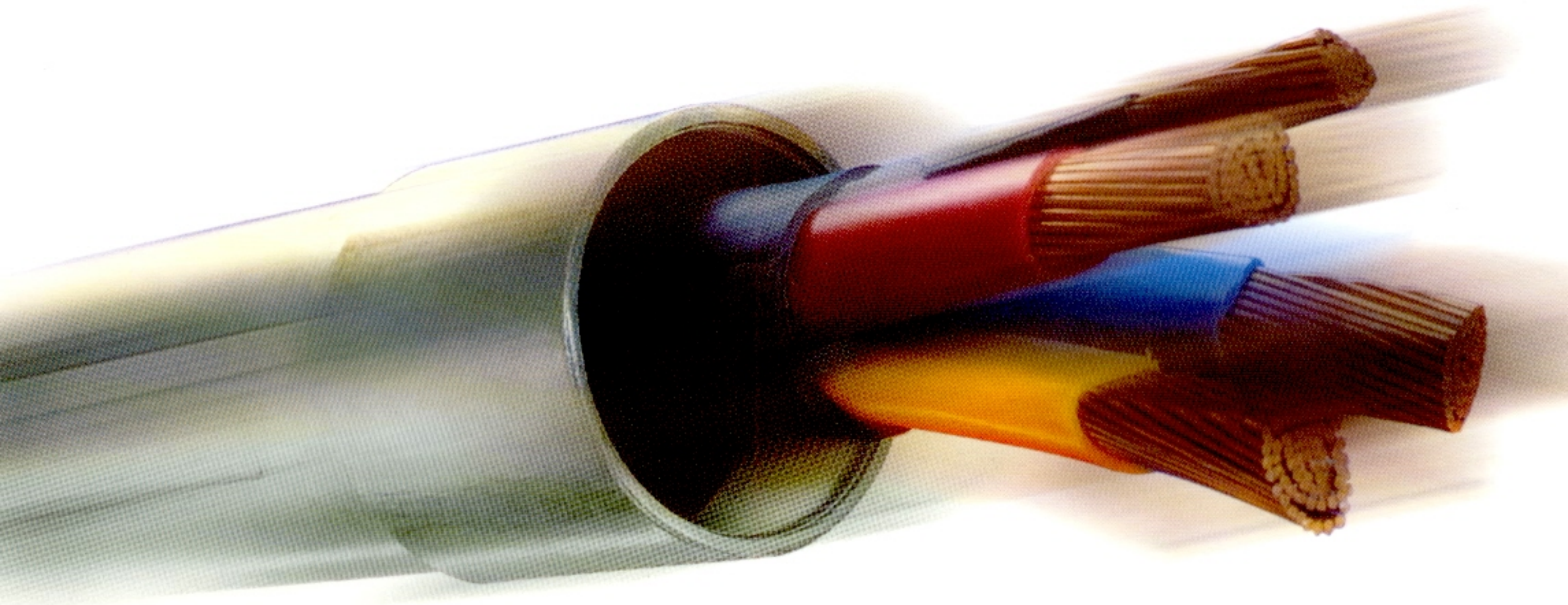


HOT DIPPED GALVANIZED  
RIGID & LIGHT Steel<sup>®</sup>  
CONDUIT



ANSI C 80.1 / UL-6  
BS 4568 & BS 31  
CONDUIT

Saudi Steel Pipe Company Ltd.



الشركة السعودية لأنابيب الصلب المحدودة

## الأنابيب الكهربائية الأمريكية

أنابيب الكهرباء الصلبة والمجلفنة بطريقة تغطيس الحديد الصلب في حوض من الزنك والالومنيوم المصهور عند درجة حرارة عالية تتميز عن المنتجات الأخرى بالتالي :

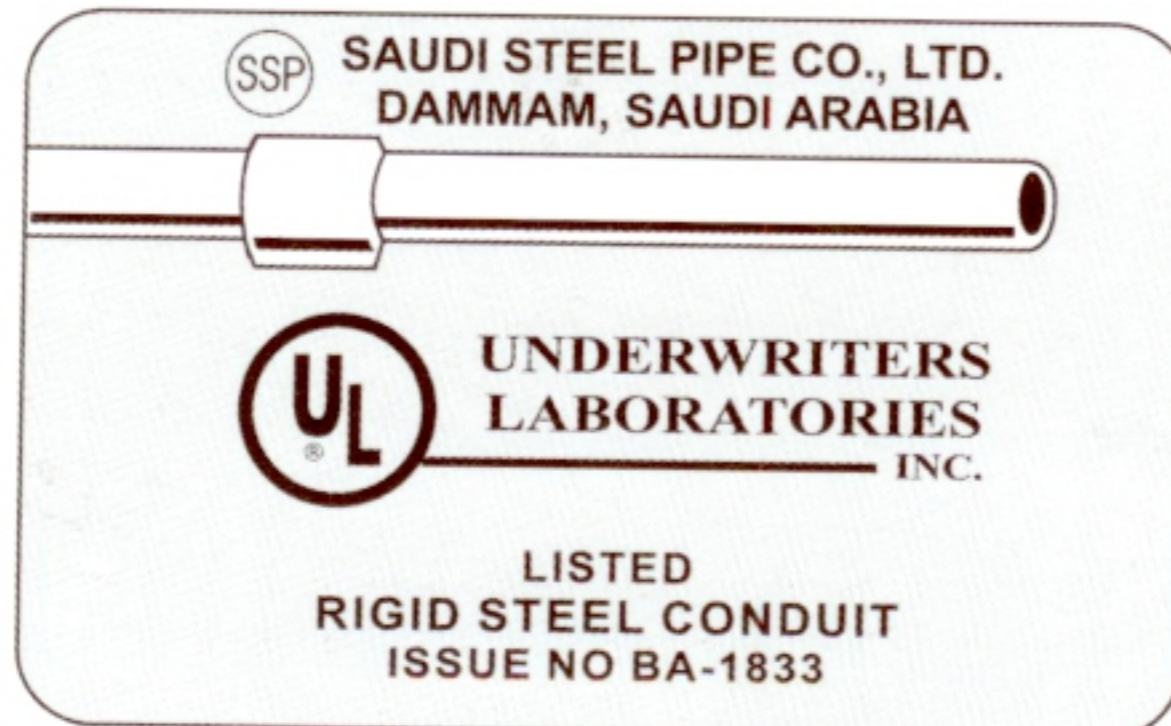
- يوفر الزنك حماية كبيرة للأنبوب من التآكل .
  - الأمان والسلامة وقوة التحمل للحرائق والصدمات وغيرها بفضل السماكة العالية للأنابيب .
- تم تصنيع الأنابيب الكهربائية الصلب المجلفنة لتطابق مواصفات المعهد الوطني الأمريكي (ANSI) وتمت أجازتها من (UL) الأمريكية تحت المواصفة رقم (UL-6).

## ANSI / UL conduit

### Uses of Conduit for Projects

Hot- Dipped Galvanized Rigid Steel Conduit provides greater protection for cables and more RESISTANCE TO CORROSION than any other conduits. Another important ADVANTAGE of using Rigid Steel Conduit is SAFETY. Its heavy wall maximizes the protection against possible FIRE HAZARDS and PHYSICAL ABUSE. SSP's HOT-Dipped Galvanized Rigid Steel Conduit is manufactured in strict conformance with the following standards:

- American National Standard Institute (ANSI) C80.1-2000
- Underwriters Laboratories Specification No.6(UL-6)





# What are the advantages of using

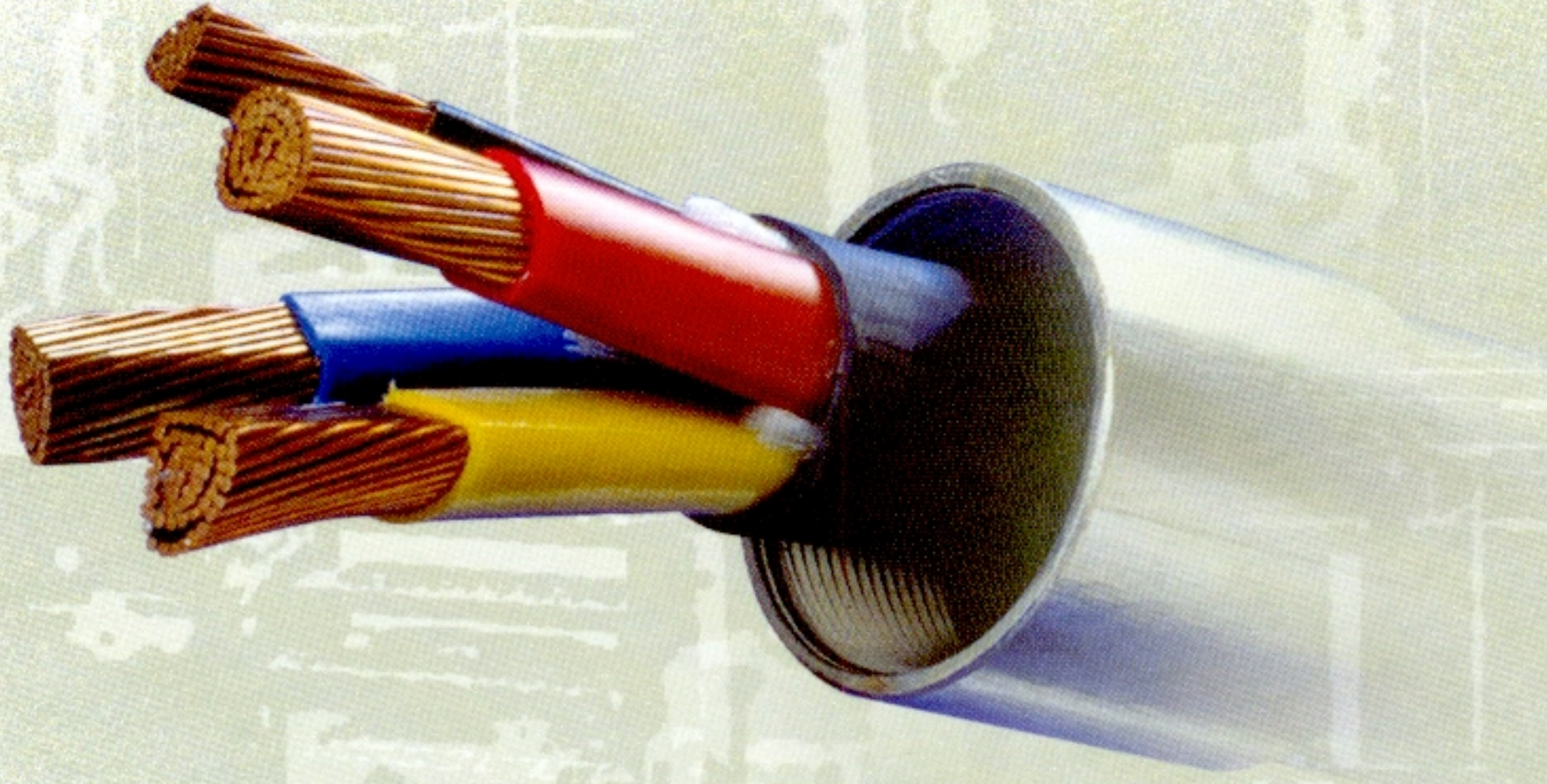
## **SSP**'S

## HOT DIPPED GALVANIZED **RIGID STEEL CONDUIT?**

- Better corrosion resistance than any OTHER METALLIC CONDUITS
- Greater resistance to mechanical or electrical damage...
- Stronger mechanical support...
- Better protection under exposure to the sun, sand storms and strong wind...
- Better dissipation of heat...
- Greater protection against short circuit fires...
- Lower cost for the same protection than any OTHER KINDS OF CONDUITS...
- Better Quality...
- Shortest time of delivery...
- Better grounding...

Rigid Steel Conduit, Hot Dip Galvanized

حسب مواصفات المعهد الوطني الأمريكي للأنابيب المجلفنة الصلبة .



ANSI C80.1 / UL 6-2000.

أنابيب الكهرباء الأمريكية

الحجم الاسمي Nominal Size		القطر الداخلي Inside Diameter		القطر الخارجي Outside Diameter		السماكة Wall Thickness		الطول Length Without Coupling		متوسط وزن الأنابيب المسنن Nominal Weight, Screwed Conduit		عدد الأنابيب في الرابطة Pieces per Bundle
A	B	in	mm	in	mm	in	mm	ft & in	m	lb/ft	kg/m	
15	1/2	0.632	16.05	0.840	21.34	0.104	2.64	9' 11- 1/4"	3.03	0.80	1.176	120
20	3/4	0.836	21.23	1.050	26.67	0.107	2.72	9' 11- 1/4"	3.03	1.06	1.563	84
25	1	1.063	27.00	1.315	33.40	0.126	3.20	9' 11"	3.02	1.54	2.298	60
32	1 1/4	1.394	35.41	1.660	42.16	0.133	3.38	9' 11"	3.02	2.03	3.02	42
40	1 1/2	1.624	41.25	1.900	48.26	0.138	3.51	9' 11"	3.02	2.51	3.706	36
50	2	2.083	52.91	2.375	60.33	0.146	3.71	9' 11"	3.02	3.35	4.941	26
65	2 1/2	2.489	63.22	2.875	73.03	0.193	4.90	9' 10-1/2"	3.01	5.34	7.94	18
80	3	3.090	78.49	3.500	88.90	0.205	5.21	9' 10-1/2"	3.01	6.91	10.286	14
90	3 1/2	3.570	90.68	4.000	101.60	0.215	5.46	9' 10-1/4"	3.00	8.43	12.56	12
100	4	4.050	102.87	4.500	114.30	0.225	5.72	9' 10-1/4"	3.00	9.87	14.70	10
125	5	5.073	128.85	5.563	141.30	0.245	6.22	9' 10"	3.00	13.36	19.861	8
150	6	6.093	154.76	6.625	168.28	0.266	6.76	9' 10"	3.00	17.75	26.39	7

NOTE: Applicable tolerances:

Length: ± 1/4in (± 6.35mm) (without coupling)

Wall thickness: -12.5%

Outside Diameter:

For trade sizes 1/2 (16 GRC) through 2 (53 GRC) in: ±0.015 in (± 0.38mm)

For trade sizes 2 1/2 (63 GRC) through 4 (103 GRC) in: ±0.025in (±0.64mm)

For trade sizes 5 (133 GRC) through 6 (155 GRC) in: ±0.031in (±0.79mm)

**ANSI/ ASME B1.20.1-1993**  
**American National Standard**  
**Pipe Threads, General Purpose (INCH)**

المواصفات الأمريكية للتسنين

**Taper 1 in 16 on Diameter** (Shown Exaggerated in Diagram)

Axis of Pipe

**Thread Height Dimensions** Unit : inch

Thread per inch	Pitch	Height of Sharp V Thread	Height of Thread $h_s = h_n$		Truncation $f_{rs} = f_{rn}$	
			max	min	max	min
n	p	H				
14	0.07143	0.06186	0.05714	0.05071	0.0056	0.0024
11-1/2	0.08696	0.07531	0.06957	0.06261	0.0063	0.0029
8	0.12500	0.10825	0.10000	0.9275	0.0078	0.0041

**Hand tight Assembly**  
 = 45° Countersink on Sizes 3-1/2" and Smaller  
 30° Countersink on Sizes 4" and Larger

Basic Power Make-up:  
 1- Turn on Sizes 1 1/2" and Smaller  
 2- Turns on Sizes 2" and Larger

**Basic Threading Data**

Unit : inch

Pipe		Threads					Coupling		
NPS Designator	Outside Diameter in.	Number of Threads per inch	End of Pipe to Hand Tight Plane, in.	Effective Length in.	Total Length in.	Pitch Diameter at Hand Tight Plane, in.	Outside Diameter	Length in.	Hand Tight Stand-Off (Number of Threads)
	D		L1	L2	L4	E1	W	NL	A
1/2	0.84	14	0.32	0.53	0.7815	0.78	1.06	1 - 1/2	5
3/4	1.05	14	0.34	0.55	0.79	0.99	1.31	1- 9/16	5
1	1.32	11- 1/2	0.40	0.68	0.98	1.24	1.58	1- 15/16	5
1- 1/4	1.67	11- 1/2	0.42	0.71	1.01	1.58	1.90	2	5
1- 1/2	1.90	11- 1/2	0.42	0.72	1.02	1.82	2.20	2	5 - 1/2
2	2.38	11- 1/2	0.44	0.76	1.06	2.30	2.75	2 - 1/16	5 - 1/2
2- 1/2	2.88	8	0.68	1.14	1.57	2.76	3.25	3 - 1/16	5 - 1/2
3	3.50	8	0.77	1.20	1.63	3.39	4.00	3 - 3/16	5 - 1/2
3- 1/2	4.00	8	0.82	1.25	1.68	3.89	4.63	3 - 5/16	5 - 1/2
4	4.50	8	0.84	1.30	1.73	4.39	5.00	3 - 7/16	5
5	5.56	8	0.94	1.41	1.84	5.45	6.30	3 - 11/16	5
6	6.62	8	0.96	1.51	1.95	6.51	7.39	3 - 15/16	6
8	8.63	8	1.06	1.71	2.15	8.50	9.63	5 - 1/4	2
10	10.75	8	1.21	1.93	2.35	10.62	11.75	5 - 3/4	2
12	12.75	8	1.36	2.13	2.55	12.62	14.00	6 - 1/8	2

**NOTE:** 1. Taper of threads on all sizes of pipe is 3/4 inch per foot on diameter. Couplings 2 inches and smaller are straight-tapped and sizes 2- 1/2 inches and over are tapered 3/4 inch per foot on diameter.  
 2. If 5 inches and larger pipes are required with threads and couplings, the pipe maybe furnished with recessed couplings when required.

Light steel conduit for electrical wiring

BS4568 : Part 1 : 1970 (Class 4)

Dimensions of Conduit and Tolerances

جدول المقاسات 1970 - BS4568

الحجم الاسمي Nominal Size	القطر الخارجي Outside Diameter		السماكة Wall Thickness			متوسط وزن الأنبوب المسنن Nominal Weight, kg/m		عدد الأنابيب في الربطه Pieces per Bundle
	Minimum mm	Maximum mm	Minimum mm	Nominal mm	Maximum mm	Screwed without Coupling		
						Minimum	Maximum	
16	15.70	16.00	1.30	1.40	1.50	0.48	0.59	150
20	19.70	20.00	1.45	1.60	1.75	0.68	0.86	105
25	24.60	25.00	1.45	1.60	1.75	0.86	1.10	70
32	31.60	32.00	1.45	1.60	1.75	1.13	1.43	48

Length of Conduit 3 ~ 4 Meter (Preferred Length = 3.75 Meter)

BS4568 : Part 1 : 1970

Basic Threading Data of Conduit

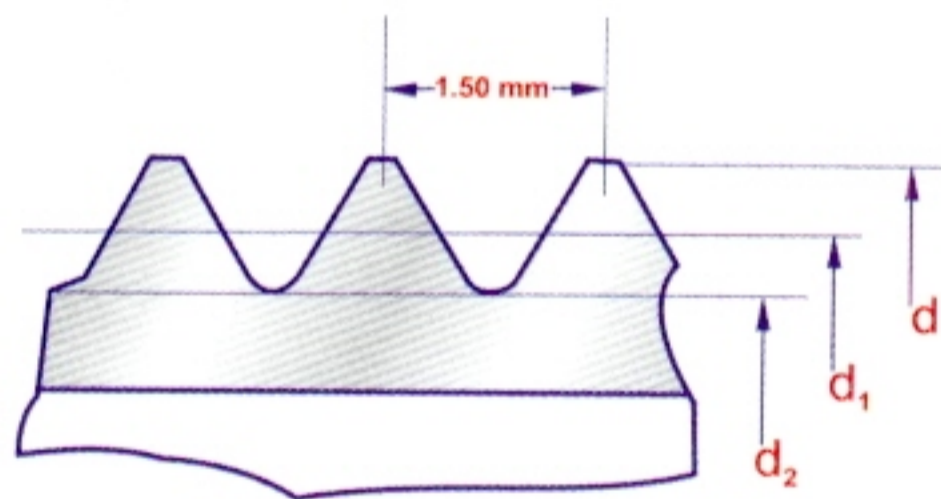
متطلبات التسنين

Nominal Size	TPI	Thread Angle (Deg.)	Pitch mm	Thread Lengths		Major Dia. (d)		Effective Diameter (d <sub>2</sub> )		Minor Diameter (d <sub>1</sub> )	
				Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
				mm	mm	mm	mm	mm	mm	mm	mm
16	17	60	1.50	11.50	13.50	15.59	15.97	14.77	14.99	13.80	14.13
20	17	60	1.50	13.00	15.00	19.59	19.97	18.77	18.99	17.80	18.13
25	17	60	1.50	16.00	18.00	24.59	24.97	23.76	23.99	22.78	23.13
32	17	60	1.50	18.00	20.00	31.59	31.97	30.76	30.99	29.78	30.13

Thread Form: Metric threads of ISO form  
Thread Spec.: Based on BS 3643 Part 3 Tables 6 & 7, Fitting Tolerance Class 7H (Free Fit)  
Thread Profile: Screw threads in accordance with Fig. 1 a & b.

(a) BS 4568 Thread (Conduit)

Where:  
d = Major Diameter  
d<sub>1</sub> = Minor Diameter  
d<sub>2</sub> = Effective Diameter



(b) BS 4568 Thread (Fittings)

Where:  
D = Major Diameter  
D<sub>1</sub> = Minor Diameter  
D<sub>2</sub> = Effective Diameter

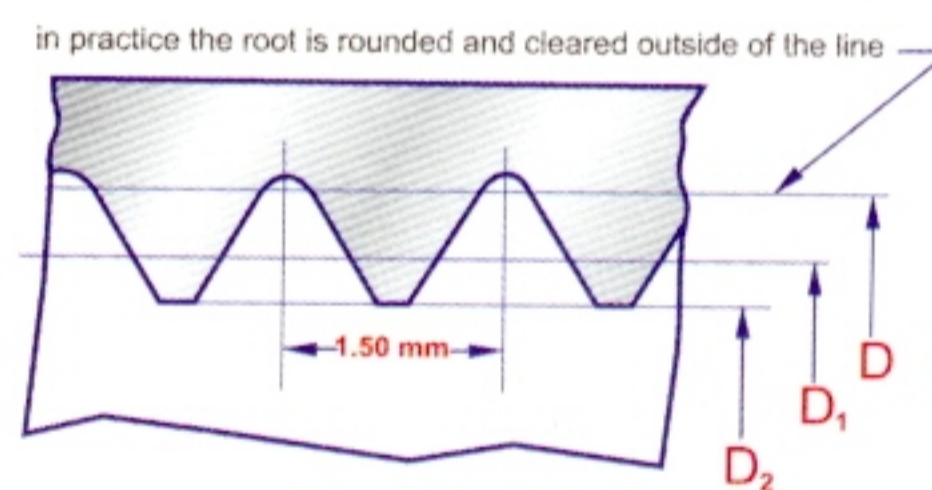


Fig. 1 Diameter Dimensions of BS 4568 screw threads

BS4568 : Part 1 : 1970

Dimensions of Coupling (Internally Screwed) and Tolerances

مقاسات الجلبة

Nominal Size in.	TPI	Thread Angle (Deg.)	Pitch mm	Length	OD	Major Dia (d)	Effective Diameter (D <sub>2</sub> )		Minor Diameter (D <sub>1</sub> )	
				Minimum	Minimum	Minimum	Minimum	Maximum	Minimum	Maximum
				mm	mm	mm	mm	mm	mm	mm
16	17	60	1.50	30.00	17.50	16	15.03	15.26	14.38	14.75
20	17	60	1.50	33.00	21.50	20	19.03	19.26	18.38	18.75
25	17	60	1.50	39.00	26.70	25	24.03	24.28	23.38	23.75
32	17	60	1.50	43.00	33.80	32	31.03	31.28	30.38	30.75

التصنيع Manufacturing of Conduit

- High Frequency ERW Method.
- Hot Dip Galvanizing (Protection type : class 4 - Heavy protection inside & outside).

متطلبات الإختبار Test Requirements

- Tensile Test.
- Bending.
- Copper Sulphate Test.
- Dimensional Test (OD, Thickness).
- Plug Gauge Test (Go, Not-Go) For accuracy of screwing.
- Visual Checking.

BS 31 (Class B - Screwed) Dimensions of Conduit and Tolerances

Nominal Size in.	Outside Diameter			Wall Thickness		Nominal Weight Screwed without Coupling		Pieces per Bundle
	Minimum	Nominal	Maximum	Minimum	Nominal	kg/m	lb/ft	
	mm	mm	mm	mm	mm			
1/2	12.43	12.70	12.73	1.32	1.42	0.40	0.27	150
3/4	18.76	19.05	19.08	1.52	1.63	0.70	0.47	105
1	25.11	25.40	25.43	1.52	1.63	0.95	0.64	70



(b) BS 4568 Thread (Fittings)

Length of conduit: 10~15 feet (3.048~4.572 meter)  
Weight of Tolerance +/- 8%

BS 31 (Class B) Basic Threading Data of Conduit

متطلبات التسنين

Nominal Size in.	TPI	Thread Angle (Deg.)	Pitch mm	Nom. Depth of Thread mm	Thread Lengths		Full OD of Threads		Effective Diameter	
					Minimum mm	Maximum mm	Minimum mm	Maximum mm	Minimum mm	Maximum mm
					1/2	18	55	1.41	0.90	9.53
3/4	16	55	1.59	1.02	12.70	14.29	18.76	19.05	17.84	18.03
1	16	55	1.59	1.02	15.88	17.46	25.11	25.40	24.19	24.38

BS 31 (Class B) - Dimensions of Coupling (Internally Screwed) and Tolerances

أبعاد الجلب

Nominal Size in.	TPI	Thread Angle (Deg.)	Pitch mm	Nom. Depth of Thread mm	Length	Thickness	Full OD of Threads		Effective Diameter	
					Minimum mm	Maximum mm	Minimum mm	Maximum mm	Minimum mm	Maximum mm
					1/2	18	55	1.41	0.90	25.40
3/4	16	55	1.59	1.02	31.75	1.52	19.05	19.43	18.03	18.22
1	16	55	1.59	1.02	38.10	1.52	25.40	25.78	24.38	24.56

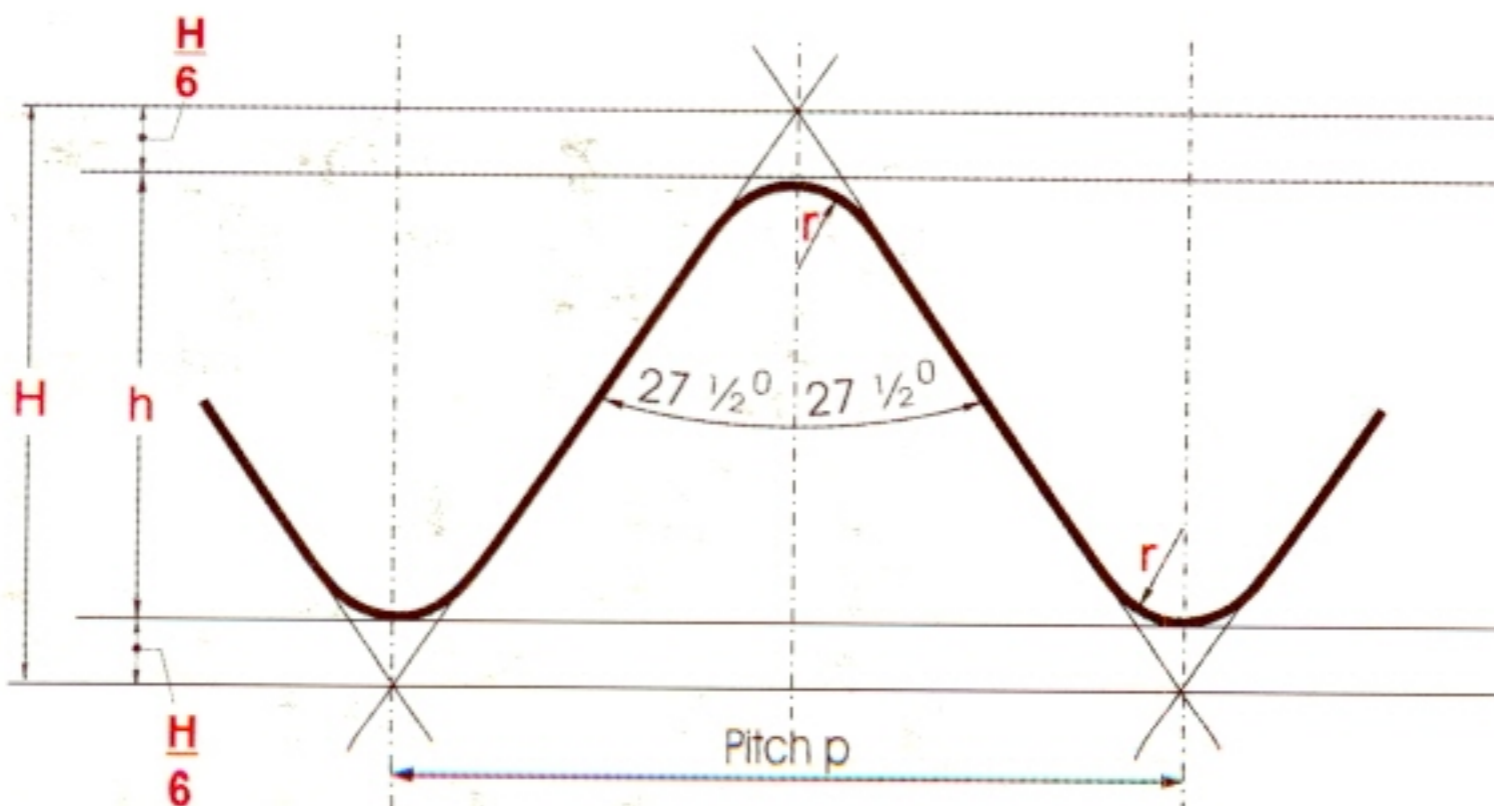


Fig. 1 Basic form of Whitworth Thread

$H = 0.96049 p$

$\frac{H}{6} = 0.160082$

$h = 2/3 H$

$r = 0.137329 p$