

Test Report No. 54S073651/1/CLC
dated 31 JULY 2007



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SUBJECT:

Testing of steel conduits submitted by Many Folk Enterprises Ltd on 19th June 2007.

TESTED FOR:

Many Folk Enterprises Limited
Flat F, 13/F, Golden Plaza
745-7 Nathan Road, Kowloon
Hong Kong

Attn: Mr Ray Lee

TEST METHOD:

BS 4568 : Part 1 : 1970
Specification for steel conduits and fittings with metric threads of ISO form for electrical installations
Part 1. Steel conduit, bends and couplers

SAMPLE DESCRIPTION:

Three samples each of 20mm, 25mm, and 32mm "COT" brand galvanized steel conduit were submitted for the following tests:

1. Dimensional measurements
2. Durability & legality of marking
3. Visual inspection of construction
4. Bend
5. Corrosion resistance refer to 54S073651-02-EKH

CLASSIFICATION:

Class 4 – Heavy protection both inside and outside

SPRAYED-ON MARKINGS ON THE STEEL CONDUITS:

1. Ø 20mm conduit BS4568 part 1 : 1970 Class 4 Heavy / IEC 60614-2-1
2. Ø 25mm conduit BS4568 part 1 : 1970 Class 4 Heavy / IEC 60614-2-1
3. Ø 32mm conduit BS4568 part 1 : 1970 Class 4 Heavy / IEC 60614-2-1



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TEST RESULTS:

(1) Dimensional Measurements

Sample Reference	"COT" Brand				BS 4568 : Part 1 : 1970 Requirements (Standard Sheet 2)							
	A (mm)	B (mm)	C (mm)	Class 4	A		B	C		Class 4		
				Weight (g/m)	Min	Max	Nominal	Min	Max	Weight (g/m)	Min	Max
Dia.20mm (S1)	19.9	1.68	14.8	729	19.7	20.0	1.6 ± 0.15	13.0	15.0	682	862	
Dia.20mm (S2)	19.8	1.70	14.2	719	19.7	20.0	1.6 ± 0.15	13.0	15.0	682	862	
Dia.20mm (S3)	19.7	1.66	14.5	724	19.7	20.0	1.6 ± 0.15	13.0	15.0	682	862	
Dia.25mm (S1)	24.8	1.69	17.2	892	24.6	25.0	1.6 ± 0.15	16.0	18.0	860	1095	
Dia.25mm (S2)	24.8	1.70	17.2	886	24.6	25.0	1.6 ± 0.15	16.0	18.0	860	1095	
Dia.25mm (S3)	24.8	1.66	17.0	895	24.6	25.0	1.6 ± 0.15	16.0	18.0	860	1095	
Dia.32mm (S1)	31.8	1.75	18.8	1167	31.6	32.0	1.6 ± 0.15	18.0	20.0	1133	1432	
Dia.32mm (S2)	31.7	1.69	18.2	1195	31.6	32.0	1.6 ± 0.15	18.0	20.0	1133	1432	
Dia.32mm (S3)	31.8	1.74	18.1	1175	31.6	32.0	1.6 ± 0.15	18.0	20.0	1133	1432	

(2) Dimensional Measurements – Screw Threads

Sample Reference	"COT" Brand	BS 4568: Pt. 1: 1970 Requirements Clause 6.1.1 (Refer to figure 2)
	Results of observation	
Dia.20mm (S1)	Passed	Snap "Not Go" Gauge-It shall not be possible, without undue force, to pass the gauge over the conduit at any point. Thread Ring "Go" Gauge-It shall be possible, without undue force, to screw the thread gauge on to the conduit.
Dia.20mm (S2)	Passed	
Dia.20mm (S3)	Passed	
Dia.25mm (S1)	Passed	
Dia.25mm (S2)	Passed	
Dia.25mm (S3)	Passed	
Dia.32mm (S1)	Passed	
Dia.32mm (S2)	Passed	
Dia.32mm (S3)	Passed	

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TEST RESULTS:

(3) Dimensional Measurements – Ovality

Sample Reference	“COT” Brand	BS 4568: Pt. 1: 1970 Requirements Clause 6.1.1 (Refer to figure 5)
	Results of observation	
Dia.20mm (S1)	Passed	Snap “Not Go” Gauge-It shall not be possible, without undue force, to pass the gauge over the conduit at any point.
Dia.20mm (S2)	Passed	
Dia.20mm (S3)	Passed	
Dia.25mm (S1)	Passed	
Dia.25mm (S2)	Passed	
Dia.25mm (S3)	Passed	
Dia.32mm (S1)	Passed	
Dia.32mm (S2)	Passed	
Dia.32mm (S3)	Passed	

(4) Bend Test

Sample Reference	“COT” Brand	BS 4568: Pt. 1: 1970 Requirements (Appendix A.2)
	Results of observation	
Dia.20mm (S1)	Passed	The conduit with welded seam, six samples shall be tested, three with the seam on the outside of the bend, and three with the seam on the flank. After the test, neither the basic material of the conduits, nor the coating of conduits with medium or heavy protection, shall show any cracks visible to the naked eyes.
Dia.20mm (S2)	Passed	
Dia.20mm (S3)	Passed	
Dia.25mm (S1)	Passed	
Dia.25mm (S2)	Passed	
Dia.25mm (S3)	Passed	
Dia.32mm (S1)	Passed	
Dia.32mm (S2)	Passed	
Dia.32mm (S3)	Passed	

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TEST RESULTS:

(5) Visual inspection on Construction

Sample Reference	"COT" Brand	BS 4568: Pt. 1: 1970 Requirements (Appendix 7.2)
	Results of observation	
Dia.20mm (S1)	Passed	Conduits shall show no appreciable unevenness and their interior and ends shall be free from burrs and fins and the like which may cause damage to cable.
Dia.20mm (S2)	Passed	
Dia.20mm (S3)	Passed	
Dia.25mm (S1)	Passed	
Dia.25mm (S2)	Passed	
Dia.25mm (S3)	Passed	
Dia.32mm (S1)	Passed	
Dia.32mm (S2)	Passed	
Dia.32mm (S3)	Passed	

(6) Test for Durability & Legibility of Marking

Sample Reference	"COT" Brand	BS 4568: Pt. 1: 1970 Requirements Clause (Appendix A.2)
	Results of observation	
Dia.20mm (S1)	Passed	Durability shall be checked by rubbing the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit. After the test the marking shall remain legible.
Dia.20mm (S2)	Passed	
Dia.20mm (S3)	Passed	
Dia.25mm (S1)	Passed	
Dia.25mm (S2)	Passed	
Dia.25mm (S3)	Passed	
Dia.32mm (S1)	Passed	
Dia.32mm (S2)	Passed	
Dia.32mm (S3)	Passed	


Chua Lee Choong
Associate Engineer


Tan See Wan
Product Manager
Building & Industrial Products
Testing Group

Test Report No. 54S073651/1/CLC
dated 31 JULY 2007



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May 2007

TEST REPORT: 54S073651-02-EKH

Date: 27 JUL 2007

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SUBJECT

Testing of galvanized steel conduit for resistance to corrosion – heavy protection
(BS 4568 : Part 1 : 1970 Class 4)

CLIENT

Many Folk Enterprises Limited
Flat F, 13/F, Golden Plaza
745-7 Nathan Road, Kowloon
Hong Kong

Attn: Mr Ray Lee

SAMPLE SUBMISSION DATE

19 Jun 2007

DESCRIPTION OF SAMPLE

Three samples of galvanized steel conduit (3 pieces each) were received.
The conduit samples were bent by the company at 90 degrees in their workshop.

Sample reference

- (1) Ø 20mm conduit BS 4568 Part 1 : 1970 Class 4 Heavy / IEC 60614-2-1
- (2) Ø 25mm conduit BS 4568 Part 1 : 1970 Class 4 Heavy / IEC 60614-2-1
- (3) Ø 32mm conduit BS 4568 Part 1 : 1970 Class 4 Heavy / IEC 60614-2-1



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27 JUL 2007



METHOD OF TEST

BS 4568 : Part 1 : 1970

"Specification for steel conduit and fittings with metric threads of ISO form for electrical metallations.

Part 1. Steel conduit, bends and couplers."

Appendix A – Clause A.3.3 – Heavy protection.

RESULTS

Sample	Test	Resistance to Corrosion Test (Class 4. Heavy protection both inside and outside)	
		Interior Surface	Exterior Surface
Ø 20mm Conduit		Passed	Passed
Ø 25mm Conduit		Passed	Passed
Ø 32mm Conduit		Passed	Passed

A handwritten signature in black ink, appearing to be 'EKH'.

ENG KIA HEE
SENIOR TECHNICAL EXECUTIVE

A handwritten signature in black ink, appearing to be 'Lishi'.

DR LI SIHAI
AVP / SENIOR CHEMIST
COATINGS & INDUSTRIAL CHEMICALS
CHEMICAL & MATERIALS

TEST REPORT: 54S073651-02-EKH
27 JUL 2007



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May 2007