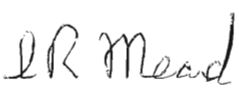



Test Report

Report No	243/4454928	This Report consists of 7 pages
Client	National Cables Industry P.O.Box 27472 Sharjah U.A.E	
Authority & date	Clients order dated 23 April 2003	
Items tested	1 sample of Electric Cable	
Specification	BS 5467:1997 Excluding clauses 6.3 and 11.3 spark test	
Results	The sample submitted complied with the requirements of the Specification For the tests which were requested	
Prepared by	C R Mead 	Technician
Authorized by	C Yogaratnam 	Technical Engineer
Issue Date	08 July 2003	
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the General Manager, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.	

1. Introduction

This Report relates to tests conducted on two samples of electric cable submitted by National Cables Industry, Sharjah, U.A.E.

This Report applies only to the particular sample tested and to the specific tests carried out and detailed within the Report. It does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of these or any related products.

2. Samples

The client submitted one sample of Electric Cable described as follows;
4x240mm², CU/XLPE/SWA/PVC 06/1KV

3. Testing

The sample submitted was subjected to the tests specified in BS 5467:1997 excluding Clauses 6.3 and 11.3 spark test, this test is in the final stage of manufacture.

4. Results

NOTE 1:- The potential variability in, both the items tested and the method of measurement used, means that for measurements close to a specified limit, the level of confidence in a compliance statement may or may not be reduced.

Further advice on the specific measurements in this report that may be affected can be obtained from the report authoriser shown on the front cover.

The results of the tests carried out are detailed in the following report

5. Conclusion

The sample submitted complied with the requirements of the Specification for the tests which were requested

TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10

4 core

Conductor size: 240 sq.mm

ASSESSMENT

Clause 12:- Marking

Elements a,b,c	Embossed	
ELECTRIC CABLE 600/1000V BS 5467		PASS
Marking on 2 line(s)	Character size 10 mm. Repeat intervals (a,b,c):-482 mm	PASS
Elements d,e		
Identification of manufacturer	Embossed	
NATIONAL CABLES UAE 4x240 MM2 CU/XLPE/SWA/PVC 2003		PASS
Repeat interval:-480 mm	PASS	PASS

Clauses 5, 8, 9, 10 and 11:- Construction

Sheath colour	Black		PASS
Filler	Textile fibres		PASS
Extruded bedding			PASS
Conductor:-	Shaped stranded plain annealed Cu	Core lay up RH	PASS
Armoured	Galvanised steel wire	LH Lay	Size: 2.46 mm
			PASS

Clause 16.3:- Voltage Tests:-

Complete Cable @ 3.5 kV		PASS
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Clauses 9.2 and 11.2:- Bedding thickness and Oversheath thickness

Thickness of oversheath	Mean N/A	Minimum 2.55 mm	PASS
Thickness of extruded bedding	Minimum 1.58 mm		PASS

Date samples received:- 20/05/03	Testing commenced:- 22/05/03	Tested by:- C.R.Mead
Date job raised:- 20/05/03	Testing completed:- 08/07/03	Checked by:- C.Yogaratham

N/A = Not Applicable

N/R = Not Requested

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10**4 core****Conductor size: 240 sq.mm****ASSESSMENT****Tests on individual cores****Clauses 5, 7 and 16.2**

Core I.D and sequence	Red	Yellow	Blue	Black	PASS
Indelibility	P	P	P	P	PASS
Class of conductor	2	2	2	2	PASS
No. of Wires	61	61	61	61	PASS
Conductor resistance @ 20°C (ohms/km)	0.0726	0.0719	0.0723	0.0725	PASS

Clauses 6.2:- Insulation Thickness

Mean (mm)	2.21	2.28	2.23	2.22	PASS
Min (mm)	1.82	1.84	1.90	1.84	PASS

Overall assessment:- PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10

4 core

Conductor size: 240 sq.mm

ASSESSMENT

Clause 17.2:-

Flame Test on complete cable PASS

Clauses 6.1, 11.1 and 18.2 :-

Tensile tests on Sheath

Compound	9	
Tensile strength unaged (N/mm ²)	17.5	
Elongation at Break-unaged (%)	255	
Tensile strength aged 7 days Air @ 100° C	17.4	
% Var Tensile strength aged 7 days in air @ 100° C	-1	
Elongation @ break aged 7 days Air @ 100° C	246	
% Var.Elongation aged 7 days Air @ 100° C	-4	
Compatibility Tensile Strength after ageing	18.3	
Compatibility Elongation @ break after ageing	273	
Compatibility % Var Tensile Strength	5	
Compatibility % Var Elongation at break	7	
Assessment of tensile tests on sheath		PASS

Tensile tests on Cores

Compound	GP8				
	Red	Yellow	Blue	Black	
Tensile strength unaged (N/mm ²)	28.4	26.4	29.7	29.6	
Elongation at Break-unaged (%)	638	631	662	657	
% Var Tensile strength, aged 7 days @ 135° C air	4	8	-1	-3	
% Var.Elongation at break, aged 7 days @ 135° C air	-4	-6	-5	-10	
Compatibility Tensile Strength after ageing	27.1	27.8	28.8	27.5	
Compatibility Elongation @ break after ageing	585	612	624	602	
Compatibility % Var Tensile Strength	-5	5	-3	-7	
Compatibility % Var Elongation at break	-8	-3	-6	-8	
Assessment of tensile tests on cores					PASS

Overall assessment :- PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10**4 core****Conductor size: 240 sq.mm****ASSESSMENT****Tests on Sheath or complete cable****Clauses 11.1:-**

Compound	9	
Insulation resistance constant @ 20° C Mohms.km	407.1	PASS
Cold elongation @ -15° C		PASS
Cold Impact @ -15° C		PASS
Loss of mass mg/cm ²	0.25	PASS
Hot pressure (%)	34	PASS
Heat shock test	PASS	PASS

Clause 9.1:- Tests on Bedding

Compound	BED	
Tensile strength (N/mm ²)	19.0	PASS
Elongation at Break (%)	280	PASS

Tests on individual cores**Clauses 6.1 and 18.3:-**

Compound	GP8				
CORE COLOURS	Red	Yellow	Blue	Black	
Hot set test Max Elongation %	68	68	65	63	PASS
Hot set test Permanent Elongation	5	5	5	0	PASS
Water absorption (Gravimetric) mg/cm ²	0.05	0.04	0.02	0.004	PASS
Insulation resistance constant @ 90° C Mohms.km	8.53	8.90	6.20	30.18	PASS
% Shrinkage of cores after test 1hr @ 130° C	2	2	2.5	2	PASS

Overall assessment:- PASS

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TESTING OF CABLE MANUFACTURED TO BS 5467:1997 TABLE 10

4 core

Conductor size: 240 sq.mm

ASSESSMENT

Clause 10.3 and 10.5:- Tests on armour

Armour resistance @ 20°C (ohms/km):	0.51	PASS
Armour wrapping test:		PASS
Mass of Zinc coating on Armour (g/m ²):	338	PASS
Tensile test (Aluminium Wire) (N/mm ²)		N/A

Overall assessment:- PASS

The sample complied with the requirements of the standard

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