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**Test report for a Rallison  
Electricals Pvt. Ltd.  
'S/Cx2.5FS' cable to  
various clauses of  
BS 6387:1994**

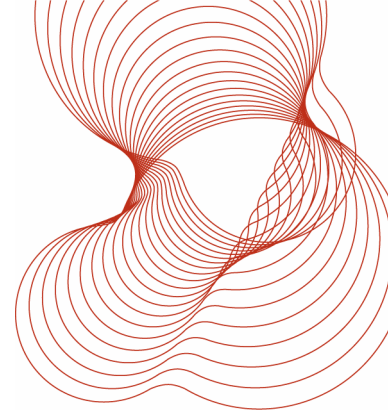
Prepared for:  
Rallison Electricals Pvt. Ltd.  
E-415  
Chopanki Industrial Area  
Bhiwadi-301 019  
Distt. Alwar  
Rajasthan  
India

13 January 2010

Test report number 259081



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**Prepared on behalf of BRE Global by**

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Name Michael Livingston

Position Technician

Signature 

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**Approved on behalf of BRE Global by**

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Name Dave Hoare

Position Senior Consultant

Date 13 January 2010

Signature 

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BRE Global  
Bucknalls Lane  
Watford  
Herts  
WD25 9XX  
T + 44 (0) 1923 664100  
F + 44 (0) 1923 664994  
E [enquiries@breglobal.com](mailto:enquiries@breglobal.com)  
[www.breglobal.com](http://www.breglobal.com)

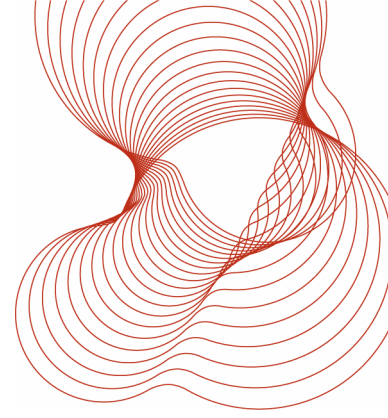
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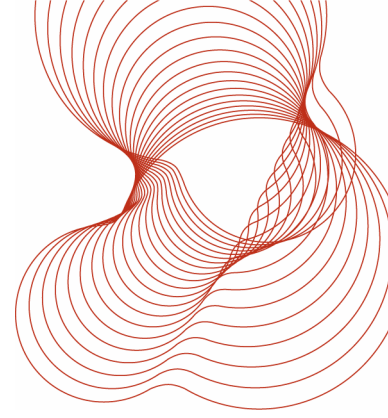
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## 1 Introduction

The requirement of the work was to determine the performance of a Rallison Electricals Pvt. Ltd. 'S/C1x2.5FS' cable when it is subjected to selected clauses from BS 6387:1994 [1].

The client for this work was Rallison Electricals Pvt. Ltd., Distt. Alwar, Rajasthan, India. The scope and authorisation for this work is given in an e-mail from S.C Batra of Rallison Electricals Pvt. Ltd., dated 3 December 2009.



## 2 Details of sample received and tests carried out

The cable was a nominal 4.4mm diameter, single core cable comprising a 2.5mm<sup>2</sup> stranded copper conductor, mica glass tape and a yellow insulation. The insulation had the following printed marking:

'RALLISON 1100V . S/CX2.5 SQMM FS CABLE 2009'.

No product information was supplied. The client's reference for the cable was 'S/Cx2.5FS'.

The test specimen was supplied by the client and received on 9 December 2009. BRE Global was not involved in the sample selection process and therefore cannot comment upon the relationship between samples supplied for test and the product supplied to market.

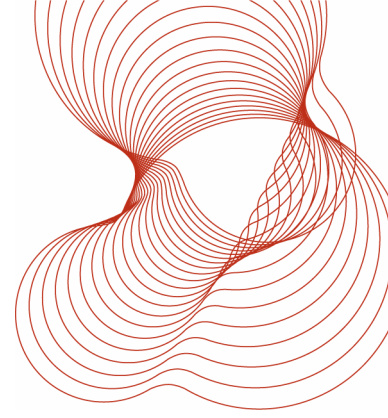
The client requested that the following tests from BS 6387:1994 were undertaken:

1. Clause 11.1 – Resistance to fire alone - Category C
2. Clause 11.2 – Resistance to fire with water - Category W
3. Clause 11.3 – Resistance to fire with mechanical shock - Category Z

To satisfy the requirements of BS 6387; testing was conducted using a stainless steel conduit as the other metallic element. Three cables were tested in a trefoil arrangement in a 20mm stainless steel conduit.

Testing to BS 6387 for Categories C, W and Z was conducted at a voltage rating of 660/1100V even though this is not recognised by the Standard.

The tests were conducted between 11 December 2009 and 14 December 2009. The tests were conducted and reported in accordance with the procedures specified in BS 6387:1994 and this report should be read in conjunction with it.



### 3 Test results

#### 3.1 Clause 11.1 – Resistance to fire alone

Test Category	Flame temperature (°C)	Test voltage (Uo/U)	Comment	Result
C	946	660/1 100V	No fuses ruptured or lamps extinguished	Pass*

\* Three cables tested in 20mm OD stainless steel conduit

#### 3.2 Clause 11.2 – Resistance to fire with water

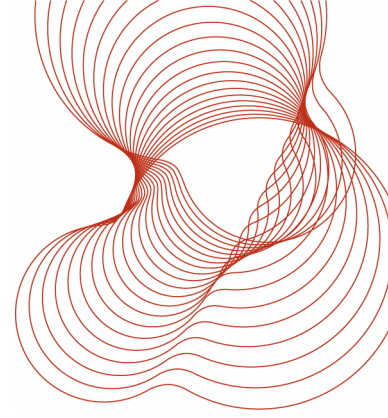
Test Category	Flame temperature (°C)	Test voltage (Uo/U)	Comment	Result
W	651	660/1 100V	No fuses ruptured or lamps extinguished	Pass*

\* Three cables tested in 20mm OD stainless steel conduit

#### 3.3 Clause 11.3 – Resistance to fire with mechanical shock

Test Category	Flame temperature (°C)	Test voltage (Uo/U)	Comment	Result
Z	954	660/1 100V	No fuses ruptured or lamps extinguished	Pass*

\* Three cables tested in 20mm OD stainless steel conduit



## 4 Conclusion

BS 6387:1994 Clauses 11.1 to 11.3 has the following acceptance criteria:

'When a cable sample is tested:

no fuse shall be ruptured,

nor any lamp extinguished during the period of the test'.

The Rallison Electricals Pvt. Ltd. 'S/Cx2.5FS' cable met the requirements of BS 6387:1994 Clause 11.1 – Resistance to fire alone (Category C), BS 6387 Clause 11.2 – Resistance to fire with water (Category W) and BS 6387 Clause 11.3 – Resistance to fire with mechanical shock (Category Z).

## 5 Reference

1. BS 6387:1994, 'Performance requirements for cables to maintain circuit integrity under fire conditions', British Standards Institution, London, 1994.

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=====REPORT ENDS=====