

CPRI

TEST REPORT



Central Power Research Institute

(A Govt. of India Society,
P.B. No. 8066, Sadashivanagar S.P.O,
Prof. Sir. C.V. Raman Road,
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CPRI

CABLES LABORATORY
DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CENTRAL POWER RESEARCH INSTITUTE

P.B. No.8066, SADASIVANAGAR SUB P.O.
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NABL Accredited
Laboratory
Cert. No. T-0010

Sheet 1 of 3

TEST REPORT

Test Report Number : DCCD-10509(B) **Dated** : 27.08.2008

Name & Address of the Customer : M/s RPG Cables Ltd.,
P.B.No. 11, 2nd pokhran Road, Thane – 400 601.

Name & Address of the Manufacturer : M/s RPG Cables Ltd.,
P.B.No. 11, 2nd pokhran Road, Thane – 400 601.

Particulars of sample tested : 1 X 1000 sq.mm 33 kV(E), Water Tight Conductor, XLPE Cable
with Semi conducting water Swellable Tape

Condition of the sample on receipt : New.

Type : Water Tight Conductor XLPE Cable

Designation : Conductor Material : Aluminium
No. of cores : One
Size : 1000 mm²
Insulation: XLPE
Armour : Unarmoured
Outer sheath : PVC
Voltage Rating : 33 kV(E)

Serial Number : Nil

Number of Samples tested : One

Date(s) of Test(s) : 23.07.08 to 15.08.08

CPRI Sample Code no(s) : DCCDCAB08S0064

Particulars of test conducted : Conductor Resistance Test, A.C High Voltage Test,
Partial discharge Test , Water Penetration Test

Test in accordance with Standard /Specification : As per IEC 60502-2- 2005

Sampling plan : Not Applicable

Customer's requirement : Nil

Deviation if any : Nil

Name of the witnessing persons

Customer's representatives : None

Other than customer's representatives : None.

Test subcontracted with address of the laboratory : Nil

Documents constituting this report (in words)

Number of sheets : Three

Number of oscillogram/s : Nil

Number of graphs : Nil

Number of photos : Nil

Number of test circuit diagrams : Nil

Number of drawings : One. Drg.No. EHV/WT/01

(Thirumurthy)
Test Engineer



(A. Sudhindra)
Joint Director

AUTHORISED SIGNATORIES



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TEST REPORT

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TEST RESULTS

1. Conductor Resistance Test:

- a) Specified value (max) : 0.0291 Ω /Km at 20 ° C
b) Observed value : 0.02698 Ω /Km at 20 ° C

2. Partial Discharge Test:

- a) Length of the sample : 10.25 metres
b) Sensitivity of the detector : 5 pC
c) Test Connection : High voltage applied to conductor
and metallic screen grounded
d) Pre stressed voltage for 10 sec (2 U₀): 38 kV ac
e) Measuring voltage (1.73 U₀) : 33 kV ac
f) Specified discharge magnitude at 1.73U₀ (Max) : 10 pC
g) Observed Discharge magnitude: Less than 5 pC

3 High Voltage Test :

- a) Test connection : High voltage applied to conductor
and metallic screen grounded
b) Test Voltage : 67 kV ac
c) Duration of test : 5 minutes
d) Ambient Temperature : 27 ° C
e) Length of the sample : 10.25 metres
f) Result : WITHSTOOD

4. Longitudinal Water Tightness Test:

a) Bending test:

A Six metre length of completed cable was subjected for bending test under the following parameters.

- (i) Diameter of conductor : 41.2 mm
(ii) Diameter of Cable : 70.0 mm
(iii) Diameter of test cylinder : 2290 mm
(iv) Number of bending cycles : Three

b) A three metre long cable was cut from the cable sample which has been subjected to the bending test and placed horizontally. A ring approx. 50 mm wide was removed from the centre of the length up to the conductor. A suitable water enclosure with tube of 10 mm diameter was so arranged as to position the tube vertically above the ring. The enclosure was filled with water so that the water level in the tube was maintained at 1 metre height above the cable axis. The sample was subjected to heating cycle as given below, after allowing it to remain for 24 hours.

- i) Length of cable : 3 metres
ii) No. of heating cycles : 10
iii) Duration of heating : 5 hours
iv) Temperature of the Conductor during heating cycle : 95- 100 ° C
v) Duration of cooling : 3 hours
vi) Result : No traces of water were observed at the ends of the sample during the test and after the test.


(Thirumurthy)
TEST ENGINEER



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NOTE

- a) The Test results relate only to the item(s) tested.
- b) Publication or reproduction of this report in any form other than by complete set of the whole report and in the language written, is not permitted without the written consent of CPRI.
- c) Any Corrections/erasure invalidates this test report.
- d) Any anomaly/discrepancy in this test report should be brought to our notice within 45 days from the date of issue.


(Thirumurthy)
TEST ENGINEER

