



**TEST METHOD FOR CONDUCTING
LONGITUDINAL WATER PENETRATION
RESISTANCE TESTS ON BLOCKED CONDUCTORS**

PUBLICATION # ANSI/ICEA T-31-610-2007

October 31, 2007

© 2007 by

INSULATED CABLE ENGINEERS ASSOCIATION, Inc.



Approved as an American National Standard
ANSI Approval Date: October 31, 2007

Insulated Cable Engineers Assoc., Publication # T-31-610-2007

*TEST METHOD FOR CONDUCTING LONGITUDINAL WATER PENETRATION
RESISTANCE TESTS ON BLOCKED CONDUCTORS*

Published by

Insulated Cable Engineers Association, Inc.

P.O. Box 1568
Carrollton, Georgia 30112
www.icea.net

© Copyright 2007 by the Insulated Cable Engineers Association. All rights including translation into other languages, reserved under the Universal Copyright Convention, the Berne Convention for the Protection of Literary and Artistic Works, and the International and Pan American Copyright Conventions.

NOTICE AND DISCLAIMER

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

The Insulated Cable Engineers Association, Inc. (ICEA) standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus standards development process. This process brings together persons who have an interest in the topic covered by this publication. While ICEA administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgements contained in its standards and guideline publications.

ICEA disclaims liability for personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. ICEA disclaims and makes no guaranty or warranty, expressed or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. ICEA does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this standard or guide.

In publishing and making this document available, ICEA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is ICEA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgement or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

ICEA has no power, nor does it undertake to police or enforce compliance with the contents of this document. ICEA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety-related information in this document shall not be attributable to ICEA and is solely the responsibility of the certifier or maker of the statement.

CONTENTS

	Page
Foreword	ii
Section 1 GENERAL	1
1.1 SCOPE	1
1.2 GENERAL INFORMATION	Error! Bookmark not defined.
1.3 DEFINITIONS.....	Error! Bookmark not defined.
Section 2 TEST EQUIPMENT	Error! Bookmark not defined.
2.1 TEST ASSEMBLY	Error! Bookmark not defined.
2.2 BENDING CONDITIONING.....	Error! Bookmark not defined.
Section 3 QUALIFICATION TEST PROCEDURES	Error! Bookmark not defined.
3.1 SAMPLES	Error! Bookmark not defined.
3.1.1 Conductor Configuration	Error! Bookmark not defined.
3.1.2 Insulation Type & Rated Voltage Classification.....	Error! Bookmark not defined.
3.2 TEST PROCEDURE.....	Error! Bookmark not defined.
Section 4 PRODUCTION TEST PROCEDURES	Error! Bookmark not defined.
4.1 SAMPLES.....	Error! Bookmark not defined.
4.2 TEST PROCEDURE.....	Error! Bookmark not defined.
Section 5 APPENDICES	Error! Bookmark not defined.
APPENDIX A (Informative) TYPICAL TEST EQUIPMENT & SETUP....	Error! Bookmark not defined.

Foreword

This test method for conducting longitudinal water penetration resistance tests on blocked conductors, T-31-610, was developed by the Insulated Cable Engineers Association, Inc. (ICEA). Cable constructions that have a blocked conductor and metallic shield interstices and/or interfaces should be tested to ICEA Publication T-34-664; "Test Method for Conducting Longitudinal Water Penetration Resistance Tests on Longitudinal Water Blocked Cables".

ICEA publications are adopted in the public interest and are designed to eliminate misunderstanding between the manufacturer and the user and to assist the user in selecting and obtaining proper product for his particular need. Existence of an ICEA publication does not in any respect preclude the manufacture or use of products not conforming to the publication. The user of this publication is cautioned to observe any health or safety regulations and rules relative to the manufacture and use of cable made in conformity with this publication.

Requests for interpretation of this publication must be submitted in writing to the Insulated Cable Engineers Association, Inc. P.O. Box 1568, Carrollton, Georgia 30112. An official written interpretation will be provided. Suggestions for improvements gained in the use of this publication will be welcomed by the Association.

The members of the ICEA working group contributing to the revision of this publication consisted of the following:

W. Temple – Chairman

J. Amézquita

S. Campbell

R. Fleming

D. Land

E. Bartolucci

J. Cancelosi

L. Hiivala

R. Thrash

R. Bristol

D. Elder

F. Kuchta

E. Walcott

Section 1 GENERAL

1.1 SCOPE

This test method provides for qualification and production test procedures for determining the effectiveness of water blocking components incorporated into the interstices of the stranded and insulated conductor as an impediment to longitudinal water penetration into the conductor. Cables qualified under previous editions of T-31-610 do not need to be retested.