



**TEST PROCEDURES FOR
EXTENDED TIME-TESTING OF
WIRE AND CABLE INSULATIONS
FOR SERVICE IN WET LOCATIONS**

ANSI/ICEA T-22-294-2016

©2016 by

INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

**ICEA TEST PROCEDURES FOR
EXTENDED TIME-TESTING OF
WIRE and CABLE INSULATIONS
FOR SERVICE IN WET LOCATIONS**

Publication T-22-294-2016

Published By
Insulated Cable Engineers Association, Inc.
www.icea.net

Approved, November 26, 2013 by
INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

Approved, March 14, 2016, by
AMERICAN NATIONAL STANDARDS INSTITUTE

© Copyright 2016 by the Insulated Cable Engineers Association, Incorporated. 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 (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, they do not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments 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 judgment 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 do they 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.

Foreword

This Test Procedure for Extended Time-Testing of Wire and Cable Insulations for Service in Wet Locations was developed by the Insulated Cable Engineers Association, Incorporated (ICEA).

ICEA Procedures are adopted in the public interest and are designed to eliminate misunderstandings between the manufacturers and the user and to assist the user in selecting and obtaining the proper product for his or her particular need. The user of this Publication is cautioned to observe any health or safety regulations and rules relative to the use of cable made in conformity with this Procedure.

Requests for interpretation of this Procedure must be submitted in writing to:

Insulated Cable Engineers Association, Inc.
www.icea.net

An official interpretation will be made by the Association.

Suggestions for improvements in this publication are welcome, and should be sent to ICEA at the previous address.

The members of the ICEA working group contributing to the writing of this Standard consisted of the following:

R. E. Fleming, Chairman

J. Armstrong
R. Bristol
W Crawford
M. Fuller
C. Lindler
H. Soleski
B. Vaughn
D. Zhao

E. Bartolucci
J. Cancelosi
A. Davila
F. Kuchta
P-M. Leblanc
C. Spradlin
E. Walcott

M. Bodziony
F. Clark
D. Farrick
M. Levitre
K. Nuckles
R. Szilagyi
R. Williamson

TABLE OF CONTENTS

	Page
1.0 SCOPE	1
2.0 TEST SPECIMENS	1
3.0 TEST SET-UP	1
3.1 IMMERSION OF TEST SPECIMENS	1
3.2 WATER TEMPERATURE	1
4.0 PROCEDURE	1
4.1 VOLTAGE WITHSTAND	1
4.2 CONTINUOUS TEST VOLTAGE	2
4.2.1 Insulation for dc service	2
4.2.2 Insulation for ac service	2
4.3 TEST DURATION.....	2
5.0 MEASUREMENTS	2
6.0 REPORT	2
7.0 REFERENCE.....	2

**TEST PROCEDURES FOR
EXTENDED TIME-TESTING OF
WIRE and CABLE INSULATIONS
FOR SERVICE IN WET LOCATIONS**

1.0 SCOPE

This publication describes procedures for long term testing of extruded wire and cable insulations for service in wet (submerged) locations. It is intended to apply to insulations rated for service up to 2000 volts inclusive. Tests may be conducted on single or multiple wall insulations, using either ac or dc voltage, as applicable.