This is a free page sample. Access the full version online.

ASME B89.7.3.1-2001

REAFFIRMED 2011

FOR CURRENT COMMITTEE PERSONNEL
PLEASE E-MAIL CS@asme.org

GUIDELINES FOR DECISION RULES: CONSIDERING MEASUREMENT UNCERTAINTY IN DETERMINING CONFORMANCE TO SPECIFICATIONS

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

This is a free page sample. Access the full version online.

Intentionally left blank

This is a free page sample. Access the full version online.

The American Society of Mechanical Engineers

AN AMERICAN NATIONAL STANDARD

GUIDELINES FOR DECISION RULES: CONSIDERING MEASUREMENT UNCERTAINTY IN DETERMINING CONFORMANCE TO SPECIFICATIONS

ASME B89.7.3.1-2001

This is a free page sample. Access the full version online.

Date of Issuance: March 18, 2002

This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda issued to this edition.

ASME will issue written replies to inquiries concerning interpretation of technical aspects of this Standard.

ASME is the registered trademark of The American Society of Mechanical Engineers.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The Standards Committee that approved the code or standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed code or standard was made available for public review and comment that provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "rate," or "endorse" any item, construction, proprietary device, or activity.

ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor assume any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.

No part of this document may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.

The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

Copyright © 2002 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All Rights Reserved
Printed in U.S.A.

This is a free page sample. Access the full version online.

CONTENTS

Foreword iv
Committee Roster vi
Correspondence With the B89 Committee vii
Abstract viii

1 Scope 1

2 Definitions 1

3 Requirements for Decision Rules 2
3.1 Zone Identification 2
3.2 Decision Outcome 2
3.3 Repeated Measurements 2
3.4 Data Rejection 2

4 Acceptance and Rejection Zones in Decision Rules 3
4.1 Simple Acceptance and Rejection Using a N:1 Decision Rule 3
4.2 Stringent Acceptance and Relaxed Rejection Using a Z% Guard Band 4
4.3 Stringent Rejection and Relaxed Acceptance Using a Z% Guard Band 4
4.4 Decision Rules With a Transition Zone 5

5 Examples of Decision Rules 5
5.1 5
5.2 6
5.3 6
5.4 6

Figures
1 An Example of Guard Bands Used for Creating a Binary Decision Rule With Stringent Acceptance and Relaxed Rejection Zones 3
2 An Example of Simple Acceptance and Rejection Using a 4:1 Ratio 3
3 Stringent Acceptance and Relaxed Rejection Examples 4
4 Symmetric Two-Sided Relaxed Acceptance and Stringent Rejection 5
5 Stringent Acceptance, Simple Rejection, and a Transition Zone Example Using Symmetric Two-Sided Guard Banding 5

Nonmandatory Appendices
A Application of Decision Rules in the Customer-Supplier Relationship 7
B Repeated Measurement 8
C Outlier Measurement Results 9
D Special Issues of Decision Rules for Instrumentation 10
E Determination of Guard Band Limits 12
F A Discussion of ISO 14253-1 13
G References 14

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation