UL 1106

ISBN 0-7629-0183-7

Underwriters Laboratories Inc.

Standard for Safety

Marine Manually Operated Shutoff Valves for Flammable Liquids

100 a century of public safety established 1894

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Full document details: UL 1106 1998

Northbrook, Illinois • (847) 272–8800
Melville, New York • (516) 271–6200
Santa Clara, California • (408) 985–2400
Research Triangle Park,
North Carolina • (919) 549–1400
Camas, Washington • (360) 817–5500

Underwriters Laboratories Inc.®

Underwriters Laboratories Inc., founded in 1894, is chartered as a not-for-profit organization without capital stock, under the laws of the State of Delaware, to establish, maintain, and operate laboratories for the examination and testing of devices, systems and materials to determine their relation to hazards to life and property, and to ascertain, define and publish standards, classifications and specifications for materials, devices, products, equipment, constructions, methods, and systems affecting such hazards.

UL Standards for Safety are developed under a procedure which provides for participation and comment from the affected public as well as industry. The procedure takes into consideration a survey of known existing standards and the needs and opinions of a wide variety of interests concerned with the subject matter of the standard. Thus manufacturers, consumers, individuals associated with consumer-oriented organizations, academicians, government officials, industrial and commercial users, inspection authorities, insurance interests and others provide input to UL in the formulating of UL Standards for Safety, to keep them consonant with social and technological advances.

A not-for-profit organization
dedicated to public safety and
committed to quality service

Documents
Document Sharing Hub
Provided by IHS under license with UL
No reproduction or networking permitted without license from IHS
Full document details: UL 1106 1998
Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Underwriters Laboratories Inc. (UL)
333 Pfingsten Road
Northbrook, IL 60062-2096

UL Standard for Safety for Marine Manually Operated Shutoff Valves for Flammable Liquids, UL 1106

Second Edition, Dated November 18, 1998

The master for this Standard at UL's Northbrook Office is the official document insofar as it relates to a UL service and the compliance of a product with respect to the requirements for that product and service, or if there are questions regarding the accuracy of this Standard.

UL's Standards for Safety are copyrighted by UL. Neither a printed copy of a Standard, nor the distribution diskette for a Standard-on-Diskette and the file for the Standard on the distribution diskette should be altered in any way. All of UL's Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

Revisions of UL Standards for Safety are issued from time to time. A UL Standard for Safety is current only if it incorporates the most recently adopted revisions.

UL provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

UL will attempt to answer support requests concerning WordPerfect, Envoy, and Standards-on-Diskette. However, this support service is offered on a reasonable efforts basis only, and UL may not be able to resolve every support request. UL supports a Standards-on-Diskette only if it is used under the conditions and operating systems for which it is intended. UL's support policies may change from time-to-time without notification.

UL reserves the right to change the format, presentation, file types and formats, delivery methods and formats, and the like of both its printed and electronic Standards without prior notice.

Standards-on-Diskette purchasers agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgement (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing a Standard-on-Diskette on the purchaser's computer system.

If a single-user version Standards-on-Diskette was purchased, one copy of this Standard may be stored on the hard disk of a single personal computer, or on a single LAN file-server or the permanent storage device of a multiple-user computer in such a manner that this Standard may only be accessed by one user at a time and for which there is no possibility of multiple concurrent access. The original distribution diskette should be stored in a safe place.

Documents
Document Sharing Hub

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Full document details: UL 1106 1998

If a multiple-user version Standards-on-Diskette was purchased, one copy of the Standard may be stored on a single LAN file-server, or on the permanent storage device of a multiple-user computer. The number of concurrent users shall not exceed the number of users authorized for the Standards-on-Diskette version. The original distribution diskette should be stored in a safe place.

Standards-on-Diskette are intended for on-line use, such as for viewing the requirements of a Standard, conducting a word search, and the like. Only one copy of the Standard may be printed from each single-user version of a Standards-on-Diskette. Only one copy of the Standard may be printed for each authorized user of a multiple-user version of a Standards-on-Diskette. An employee of an organization purchasing a Standard-on-Diskette can make a copy of the page or pages being viewed for their own fair and/or practical internal use. Because of differences in the computer/software/printer setup used by UL and those of Standards-on-Diskette purchasers, the printed copy obtained by a purchaser may not look exactly like the on-line screen view or the printed Standard.

The requirements in this Standard are now in effect, except for those paragraphs, sections, tables, figures, and/or other elements of the Standard having future effective dates as indicated in the note following the affected item. The prior text for requirements that have been revised and that have a future effective date are located after the Standard, and are preceded by a "SUPERSEDED REQUIREMENTS" notice.

New product submittals made prior to a specified future effective date will be judged under all of the requirements in this Standard including those requirements with a specified future effective date, unless the applicant specifically requests that the product be judged under the current requirements. However, if the applicant elects this option, it should be noted that compliance with all the requirements in this Standard will be required as a condition of continued Listing and Follow-Up Services after the effective date, and understanding of this should be signified in writing.

Copyright © 1998 Underwriters Laboratories Inc.

This Standard consists of pages dated as shown in the following checklist:

Page	Date
1-16	November 18, 1998

Documents
Document Sharing Hub

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Full document details: UL 1106 1998

NOVEMBER 18, 1998

UL 1106

Standard for Marine Manually Operated Shutoff Valves for Flammable Liquids

First Edition – August, 1984

Second Edition

November 18, 1998

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

ISBN 0-7629-0183-7

COPYRIGHT © 1984, 1998 UNDERWRITERS LABORATORIES INC.

Documents
Document Sharing Hub

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS
Full document details: UL 1106 1998

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

No Text on This Page

Documents
Document Sharing Hub

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Full document details: UL 1106 1998

CONTENTS

FOREWORD 4

INTRODUCTION

1 Scope 5
2 Units of Measurement 5
3 Components 5

CONSTRUCTION

4 General 6
5 Assembly 6
6 Installation, Operation, and Servicing 7
7 Operating Controls 7

PERFORMANCE

8 General 8
9 Operation Tests 8
9.1 General 8
9.2 Leakage Test 8
9.3 Static Suction Test 8
9.4 Surge Suction Test 9
10 Operating Force Test 9
11 Vibration Test 10
12 Shock Test 10
13 Temperature Tests 10
13.1 General 10
13.2 High Ambient Temperature Test 11
13.3 Low Ambient Temperature Test 11
14 Hydrostatic Tests 11
14.1 Leakage Test 11
14.2 Strength Test 11
15 Mechanical Strength Test 11
16 Fire Test 11
17 Salt Spray Corrosion Test 14
18 10-Day Moist Ammonia Air Stress Cracking Test 14
19 Resistance to Liquids Tests 15

MANUFACTURING AND PRODUCTION TESTS

20 General 15
21 Leakage Test 15
22 Strength Test 15

MARKING

23 General 16
24 Installation and Operating Instructions 16

Documents
Document Sharing Hub

Provided by IHS under license with UL

No reproduction or networking permitted without license from IHS

Licensee=North Carolina State Univ/5618801100
Not for Resale, 12/07/2014 23:09:46 MST

Full document details: UL 1106 1998