

# Mooring of Ships *to* Piers and Wharves



Mooring Analysis Task Committee



Edited by  
John W. Gavthwaite, P.E.



COASTS, OCEANS,  
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# Mooring of Ships to Piers and Wharves

Prepared by  
the Mooring Analysis Task Committee  
of the Technical Committee on Ports and Harbors of  
the Coasts, Oceans, Ports, and Rivers Institute of  
the American Society of Civil Engineers

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John W. Gaythwaite, P.E.

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# CONTENTS

<b>PREFACE .....</b>	<b>vii</b>
<b>CONTRIBUTORS .....</b>	<b>ix</b>
<b>NOTATION .....</b>	<b>xi</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Purpose and Scope.....	1
1.2 General Considerations .....	2
1.3 Vessel Characteristics.....	3
1.4 Port Facilities.....	10
1.5 Mooring Arrangements .....	11
1.6 Industry Standards.....	15
<b>2. MOORING PRACTICE AND DESIGN REQUIREMENTS.....</b>	<b>19</b>
2.1 General Considerations .....	19
2.2 Environmental Conditions .....	21
2.3 Design Vessels and Berth Occupancy .....	28
2.4 Design Criteria .....	29
2.5 Allowable Loads and Factors of Safety .....	33
<b>3. MOORING SYSTEM COMPONENTS .....</b>	<b>35</b>
3.1 Mooring Lines.....	35
3.2 Fittings and Hardware.....	38
3.3 Dockside Equipment.....	43
3.4 Fender Systems .....	45
3.5 Docking Aid and Monitoring Systems .....	48
3.6 Mechanical and Automated Mooring Systems.....	50
3.7 Shipboard Equipment.....	51

**4. FORCES ON MOORED VESSELS..... 53**

4.1 General Considerations ..... 53

4.2 Wind Forces ..... 56

4.3 Current Forces..... 64

4.4 Passing Vessel Forces ..... 70

4.5 Wave Forces ..... 75

4.6 Seiche and Long Wave Effects ..... 80

4.7 Tide and Draft Changes and Vessel Movements  
at Berth..... 83

4.8 Ice ..... 86

**5. MOORING ANALYSIS METHODS..... 89**

5.1 Static Mooring Analysis..... 89

5.2 Dynamic Mooring Analysis..... 98

5.3 Available Software ..... 112

5.4 Physical Models..... 117

**6. OPERATIONAL CONSIDERATIONS ..... 119**

6.1 General Considerations ..... 119

6.2 Vessel Movements..... 119

6.3 Incidents/Breakaways ..... 127

6.4 Maintenance..... 131

**APPENDIX. UNIT CONVERSIONS..... 135**

**REFERENCES ..... 137**

**INDEX ..... 145**

## PREFACE

At the fall 2001 meeting of the ASCE Technical Committee on Ports and Harbors of the Coasts, Oceans, Ports, and Rivers Institute (COPRI), Robert N. Robertson recommended that a task committee be established to prepare a document on mooring analysis for fixed piers and wharves. A new committee proposal was submitted in December 2001, and the first meeting of the mooring analysis task committee was held in March 2002. Robert Robertson was selected as chairman and Martin Eskijian as secretary. The committee discussed many topics and issues and added much since the original series of meetings. In April 2007 the chairmanship passed to John W. Gaythwaite at the direction of the Ports and Harbor Committee of COPRI, and the focus of the group subsequently became the development of an ASCE Manual of Practice (MOP) for the mooring of ships at fixed harbor facilities.

The purpose of this MOP is to provide designers of piers and wharves and other fixed marine facility structures with the necessary background and resource information to ensure that their structure designs are sound and adequate and provide a safe berth for the types of vessels to be accommodated. This is necessary because currently no single building code or standard specifically addresses the design of berthing and mooring facilities in general, and the guideline documents that do exist have varying requirements for specific facility types. In addition, many costly mooring incidents have occurred, emphasizing the need for a better understanding of mooring design principles. The chairman wishes to thank all of those involved in this process and trusts that the guidance provided herein will provide useful and timely information to the port engineering community.



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