## Table of Contents

### Volume 1

#### LAW, REGULATION

- MABO AND THE LAW OF THE SEA CONVENTION - STATE AND NATIONAL IMPLICATIONS IN THE CHANGING POSITION OF AUSTRALIA AS AN INTERNATIONAL MARITIME STATE  
  **C O'Connor, M O'Connor, Thomson Rich O'Connor, Solicitors, Australia**  
  Section I

#### LNG & LPG ECONOMICS

- SUPPLY CONTRACTS AND PRICING IN THE LNG MARKET  
  **R Clarke, Shell Company of Australia, Australia**  
  Section II

- MAXIMISING PROFIT FROM LPG STREAMS: ECONOMIC & TECHNICAL CHALLENGES FOR THE 1990s  
  **D Seddon, Hindsford Pty Ltd, Australia**  
  Section II

#### STRUCTURAL CONCEPTS & DETAILS

- DESIGN OF A CONCRETE GRAVITY-BASED SUBSTRUCTURE FOR BASS STRAIT, AUSTRALIA  
  **G J Parker, Esso Australia Ltd, Australia**  
  Section III

- DURABLE AND EFFICIENT CONCRETE OFFSHORE STRUCTURES  
  **R Ganz, VSL International Switzerland, Switzerland**  
  Section III

- DESIGN AND CONSTRUCTION OF GRAVITY PLATFORMS ON CALCAREOUS SEDIMENTS  
  **B Roland, Norwegian Contractors AS, Norway**  
  **K Hoeg, Geotechnical Institute, Norway**  
  Section III

- ADVANCED PLATFORMS FOR DEEP WATER PRODUCTION  
  **R Seymour, Offshore Technology Research Center, U.S.A.**  
  Section III

- OFFSHORE CONCEPTS FOR 3000-FT WATER DEPTH, GULF OF MEXICO  
  **P W Marshall, The University, Newcastle Upon Tyne, United Kingdom**  
  Section III

- RESPONSE OF A RIGID PLASTIC BEAM WITH ELASTIC DEFORMATION AT ITS ROOT SUBJECTED TO IMPACT LOADING  
  **B Wang, Nanyang Technological University, Singapore**  
  **M H Yang, Baker Marine Energy Pte Ltd, Singapore**  
  Section III

- A RECOMMENDED PRACTICE FOR THE SITE ASSESSMENT OF JACK-UP UNITS  
  **J C Trickey, Noble Denton Consultancy Services Ltd, United Kingdom**  
  **M J R Hoyle, R V Ahilan, NDCS Limited, United Kingdom**  
  Section III
STRUCTURAL CONCEPTS & DETAILS (continued)  

DESIGN AND MANUFACTURE OF A LOAD MONITORING SYSTEM INSTALLED ON A C.A.L.M. BUOY AT PORT STANVAC, SOUTH AUSTRALIA  
P Gourlay, UNIRIG, Pty Ltd, Australia  

NEW MATERIALS  

NEW GENERATION TMCP STEEL IN THE OFFSHORE INDUSTRY  
B Renwick, B G Renwick (WA) Pty Ltd, Australia  

NEW LOW CARBON EQUIVALENT TMCP OFFSHORE STRUCTURAL PLATE STEELS  
C R Killmore, G R Harris, J F Barrett, BHP Steel, Australia  

MATERIALS PROPERTIES OF THE NEW HIGH-STRENGTH AUSTENITIC STAINLESS STEEL REMANIT 4565S (UNS S34565) FOR OFFSHORE APPLICATIONS  
W Heimann, Thyssen Stahl AG  
P Moore, Atlas Steel Limited, Australia  
J Wickenkamp, Schulz Export GmbH, Germany  

SEAWATER RESISTANCE OF SECOND GENERATION SUPERAUSTENITIC STAINLESS STEEL  
B Wallen, E Alfonsson, Avesta Sheffield AB, Sweden  
P George, Avesta Sheffield Ltd, Australia  

FABRICATION OF STAINLESS STEEL CLAD PIPE STRINGS FOR THE MAUI "B" PIPELINE  
M Dale, R J Brown and Associates, Singapore  
J Wilson, (ex) Shell Todd Oil Services (STOS), New Zealand  

FLAME BARRIERS FROM NON-INSULATING FABRICS  
D Royaerts, P A Coles, Societe Ariegeoise de Bonneterie, France  

RISK & RELIABILITY  

APPLICATION OF RELIABILITY ANALYSIS TO OFFSHORE FACILITIES  
S Bastin, E Corran, H Witt, Safety and Reliability Centre, ANSTO, Australia  

FATIGUE OF WELDED STRUCTURES: A DECADE AND A HALF OF RESEARCH  
I S Cole, CSIRO, Australia  

PROBABILISTIC RISK ASSESSMENT - USES AND ABUSES  
R E Melchers, The University of Newcastle, Australia
RISK ASSESSMENT AS A COST EFFECTIVE DECISION MAKING TOOL
EXAMPLE: LOCATION OF AN ESD VALVE
A Stromsvag, DNV Technica, Australia
L R Fletcher, West Australian Petroleum, Australia

OFFSHORE CERTIFICATION - THE CHANGING METHODOLOGY AS APPLIED BY DET NORSKE VERITAS IN AUSTRALIA
M K Sjaastad, Det norske Veritas Classification AS, Australia

SUBSEA DEVELOPMENT & DRILLING

REVIEW OF THE ENVIRONMENTAL IMPACT OF DRILLING ACTIVITIES IN AUSTRALIAN WATERS
J B Hinwood, L R Denis,
Australian Marine & Offshore Group Pty Ltd, Australia

ADVANCED DRILLING TECHNOLOGY FOR SCIENTIFIC OCEAN DRILLING
A Storms, T Francis, B Harding, D Huey, L Holloway,
D Ruedelhuber, P Rabinowitz, Ocean Drilling Program, U.S.A.

SUBSEA DEVELOPMENTS
A MULTI DISCIPLINARY DESIGN CHALLENGE
R J Stuart, S P Hindmarsh, S Evans, R H Brown - CMPS, Australia

TRAJECTORY CONTROL - A KEY ISSUE IN OFFSHORE DRILLING
M Agawami, E E Maitila, S S Rahman,
The University of New South Wales, Australia

A SUBSEA WIRELINE SERVICE SYSTEM
CC Cobb, Otis Engineering
C S Headworth, Wharton Williams

THE INVESTIGATION OF INDEX TESTS FOR SHALE MECHANICAL PROPERTIES FROM DRILL CUTTINGS IN AID OF WELLBORE STABILITY
M O Mozina, S J D Cox, Monash University, Australia

INFILL DRILLING BASS STRAIT USING ADDITIONAL CONDUCTORS
S French, C Charles, Wholohan Grill & Partners, Australia
C B McCarthy, K G Grenda, Esso Australia Ltd, Australia
G Davis, Worley Engineering, Australia

HYDROCARBON PRODUCTION PLAY MODEL OF THE NANJHTAO BASIN IN THE EAST CHINA SEA
J Chow, National Taiwan Ocean University, Taiwan
H M Chen, Chinese Petroleum Corporation, R.O.C.
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Authors</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII - 1</td>
<td>EVALUATION OF FPSO SEPARATOR DESIGN OPTIONS</td>
<td>R Ireland, Offshore Separation Pty Ltd, Australia</td>
<td></td>
</tr>
<tr>
<td>VII - 2</td>
<td>THE ROLE OF SEGMENTED CLAMPS ON WELLHEAD, RISER AND TREE CONNECTIONS IN REDUCING RIG TIMES AND INCREASE SAFETY</td>
<td>Lee Yow Chuan, FMC Southeast Asia Pte Ltd</td>
<td></td>
</tr>
<tr>
<td>VII - 4</td>
<td>THE TETHERED AND REMOTE PIPELINE ISOLATION PACKER</td>
<td>J R Adams, H A Anderson, Nowsco Well Services Ltd, Canada</td>
<td></td>
</tr>
<tr>
<td>VII - 5</td>
<td>PIPELINE EVALUATION USING THE GEOMETRY PIPELINE INERTIAL GAUGE (GEOPIC)</td>
<td>J R Adams, H A Anderson, Nowsco Well Services Ltd, Canada</td>
<td></td>
</tr>
<tr>
<td>VII - 6</td>
<td>ADVANCES IN OFFSHORE HIGH PRESSURE FLARE DESIGN</td>
<td>J C Franklin, John Zink Company, U.S.A.</td>
<td></td>
</tr>
<tr>
<td>VII - 7</td>
<td>LOW TEMPERATURES IN THE RANKIN &quot;A&quot; HP FLARE SYSTEM</td>
<td>G A Robertson, Woodside Offshore Petroleum Pty Ltd, Australia</td>
<td></td>
</tr>
<tr>
<td>VII - 8</td>
<td>SCREW PUMPS FOR MULTIPHASE PUMPING</td>
<td>G Bardewyck, Bornemann GmbH, Germany</td>
<td></td>
</tr>
<tr>
<td>VIII - 1</td>
<td>MULTI-PURPOSE SUPPORT VESSELS ON THE NORTH WEST SHELF</td>
<td>W N Pointon, Mermaid Sound Port &amp; Marine Services Pty Ltd, Australia, F Pearce, Woodside Offshore Petroleum Pty Ltd, Australia</td>
<td></td>
</tr>
<tr>
<td>VIII - 2</td>
<td>DEVELOPMENT OF BUNDLE TOW METHODS AND INTEGRATION OF PRODUCTION SYSTEMS</td>
<td>E J Rooduijn, Rockwater Ltd, Scotland</td>
<td></td>
</tr>
<tr>
<td>IX - 1</td>
<td>QUALITY MANAGEMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX - 2</td>
<td>BEYOND AS3901: MANAGING THE DEVELOPMENT OF QUALITY SYSTEMS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUALITY MANAGEMENT (continued)  

ACCESS TO ADI'S HEAVY ENGINEERING BUSINESS CAN IMPROVE PROJECT FEASIBILITIES  
R Thomson, R Sexton, Australian Defence Industries, Australia  
IX - 3

HYDRODYNAMICS & DYNAMICS  

DYNAMIC SIMULATION OF A TWO PART UNDERWATER TOW  
S D Ranmuthugala, S A Gottschalk  
Australian Maritime Engineering Cooperative Research Centre, Australia  
I - 1

NON-GAUSIAN NATURE OF THE DYNAMIC RESPONSE OF SKELETAL OFFSHORE STRUCTURES SUBJECTED TO GAUSSIAN OCEAN WAVES  
P Swanell, University of Southern Queensland, Australia  
G R Hooper, Connel Wagner (QLD) Pty Ltd, Australia,  
I - 2

A METHOD FOR FREQUENCY-DOMAIN CALCULATION OF SLOWDRIFT MOTION OF MOORED VESSELS USING STOCHASTIC LINEARIZATION AND SEMI-ANALYTIC INTEGRATION OF RESPONSE POWER SPECTRA  
K E Kaasen, MARINTEK, Norway  
I - 3

EFFECT OF ORBITAL VELOCITY ON WAVE PLUS CURRENT FORCE  
J B Hinwood, A.M.E.R.C. & Monash University, Australia  
B D Chandler, InteInc, U.S.A.  
I - 4

PREDICTION OF THE PHASE AVERAGED NEAR WAKE FLOW OF A CYLINDER BY FAR FLOW/NEAR FLOW VELOCITY CORRELATIONS  
I A Sibetheros, R W Miksad, The University of Texas at Austin, U.S.A.  
I - 5

TENSION LEG PLATFORMS - MORISON FORCING IN THE "SPLASH" ZONE  
N Haritos, The University of Melbourne, Australia,  
I - 6

APPLICATION OF THE HYBRID FREQUENCY TIME DOMAIN METHOD TO OFFSHORE PROBLEMS  
J M Roesset, Chih-Peng Yu, The University of Texas at Austin, U.S.A.  
I - 7

FLUID-STRUCTURE INTERACTION STUDIES ON VERTICAL SURFACE-PIERCING CYLINDERS AT THE UNIVERSITY OF MELBOURNE  
N Haritos, The University of Melbourne, Australia  
I - 8

A COMPUTER CONTROLLED WAVE ENERGY CONVERSION DEVICE  
V Rouillard, Victoria University of Technology, Australia  
I - 9

SIMPLIFIED DYNAMIC MODEL FOR ESTIMATING OF EXTREME ANCHORLINE TENSION  
H Lie, N Sodahl, MARINTEK, Norway  
I - 10

COMPLETION RISERS - ASSESSMENT DOWNUNDER  
M L Morison, C D F Lawlor, Pipe Line Technologists, Australia  
I - 11