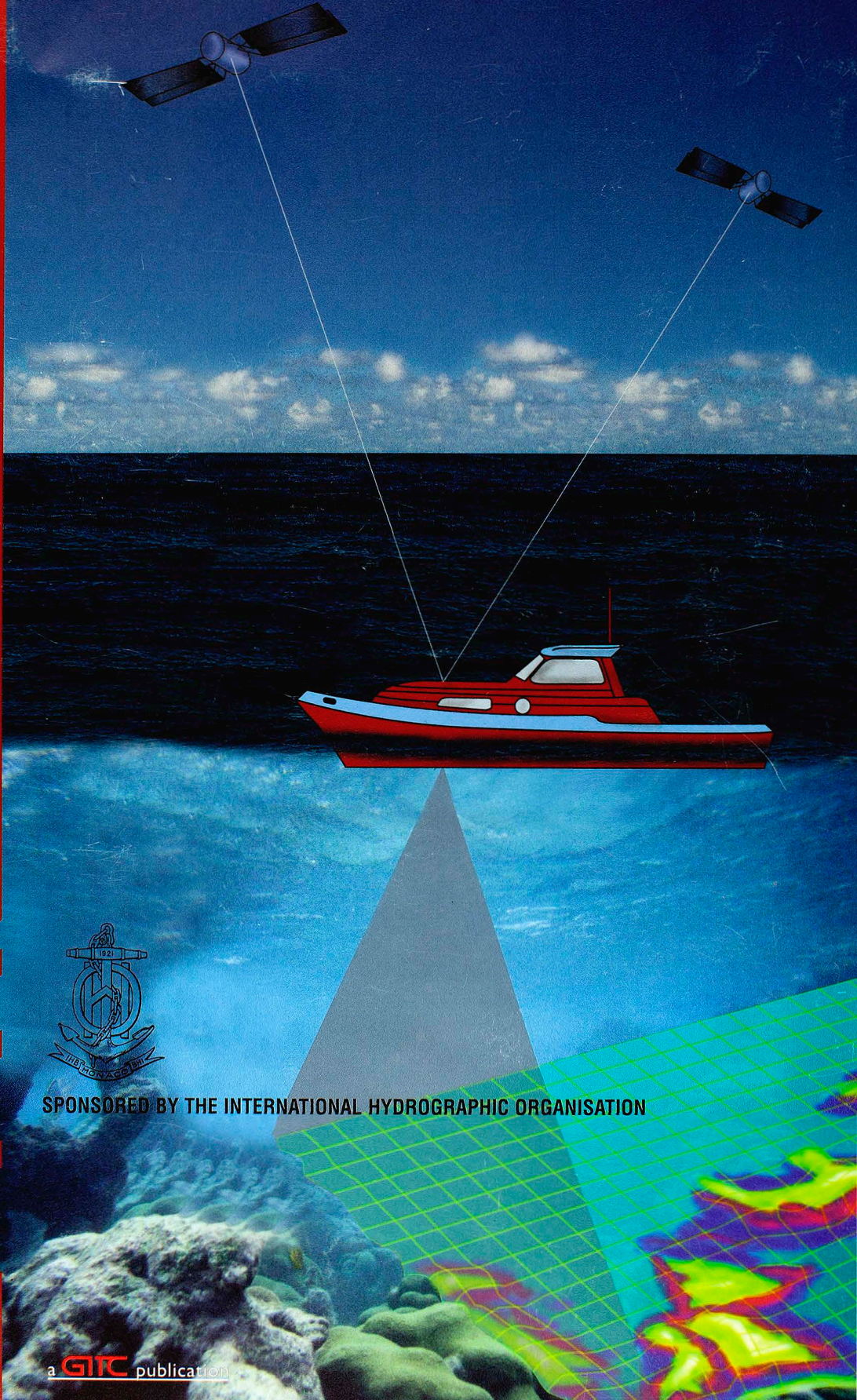


# The International Hydrographic Review

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APRIL 2006



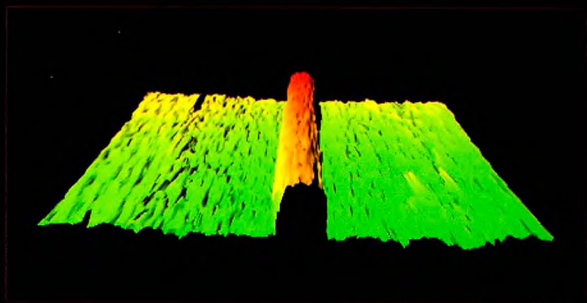
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# Precision survey

## EM 3002 - for inspection and shallow water surveys

### ROV deployment

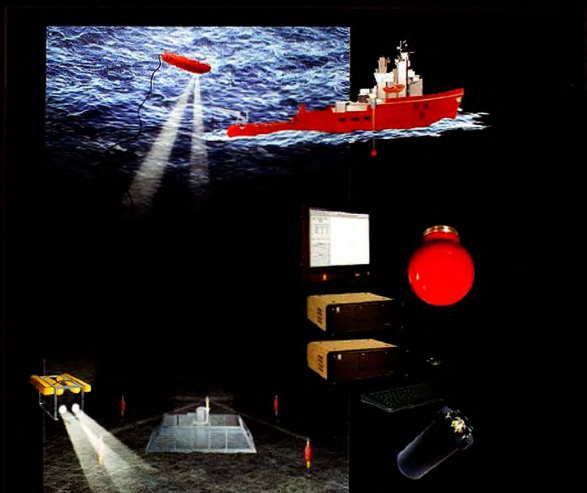
EM 3002 is the optimum solution for inspection of pipes or other structures from an ROV. 1 or 2 sonar heads can be fitted at any angle and communicates to the surface processor via std. fibre optic data transmission. The EM 3002 bottom detection has been optimised for inspection of structures that may have free-spans and any shape. High resolution is guaranteed by 256 focussed beams per sonar head. Swath geometry is controllable for each sonar head, pressure sensor can be connected for accurate depth measurements.



Courtesy of Stolt Offshore

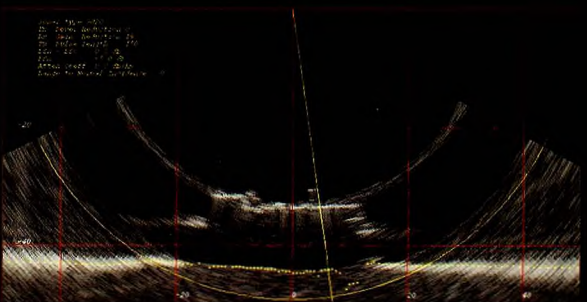
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The ultimate in accurate positioning for precise surveying is obtained by including Hydroacoustic Aided Inertial Navigation, HAIN to improve the quality of the High Precision Acoustic Positioning, HiPAP<sup>®</sup>. HAIN is compatible with the HiPAP<sup>®</sup> acoustic positioning system and will also provide heading and motion sensor data for the multibeam system.



### Surface deployment

EM 3002 will produce accurate seabed survey data, well within IHO S-44 requirements for special order surveys. It has also been tested successfully versus the corresponding requirements for detection of objects on the seabed. The system beams are actively stabilized for both pitch and roll movements. A new feature is the capability to use the built-in water column imaging capability for deciding the minimum depth of wrecks without the need for diver inspection.



Courtesy of John Hughes Clark, University New Brunswick

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## Contents

## ■ Instructions for Contributors

4

## ■ Editorial

By Adam J. Kerr, Editor

5

## ■ Articles

**Beam to Chart****A Case Study of the LIDAR Survey of the Sound of Harris**

By Martin Wakefield, Head of Chart Branch 1C (Scotland and Ireland), UK Hydrographic Office; Mark Sinclair, Survey Program Manager, Tenix LADS Corporation and Nigel Townsend, Survey Manager - Adelaide, Tenix LADS Corporation

6

**Zones of Confidence (ZOC) for New Zealand**

By K. Smith, HSA Systems Ltd, G. Cox Discovery Marine Ltd

20

**Surveying in the Exclusive Economic Zone:****Possible Guidelines for Rights and Duties**

By Sam Bateman

31

**Geographic Names and the United Nations Convention on the Law of the Sea**

By Trent Palmer, Executive Secretary for Foreign Names, United States Board on Geographic Names

49

## ■ Book reviews

**Savour the Moment****The Life and Work of Alan Ingham**

Published by Halsgrove, Tiverton, England in 2005

55

**Sea Charts of the British Isles****A Voyage of Discovery around Britain and Ireland's Coastline**

By John Blake, published by Conway Maritime Press in 2005, ISBN1-84486-024-8

56

**The Oxford Companion to Ships and the Sea**

By I.C.B. Dear and Peter Kemp, Published by Oxford University Press

(Second edition 2005, First edition 1976), ISBN 0-9-860616-8 / ISBN 978-0-19-860616-1

57

## ■ Rectification

**Editorial IHR November 2005**

By Adam J. Kerr, Editor

59

**Capacity Building in Ocean Bathymetry****The Nippon Foundation GEBCO Training Programme at the University of New Hampshire**

By Srinivas Karlapati, Dave Monahan, Hugo Montoro Caceres, Taisei Morishita, Abubakar Abdullahi Mustapha, Walter Reynoso Peralta, Shereen Sharma and Clive Angwenyi

60

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