

Competency Certification for Hydrographic Surveyors – The Australian Experience

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www.hydro.gov.au



The Case for Competency Certification – The maritime situation

- Hydrographic Surveying is an essential enabler for all maritime pursuits
- New sophisticated technologies require hydrographic surveyor to have necessary competencies to perform operations – errors more insidious / less apparent
- Larger ships, less underkeel clearance, less margin for error
- Greater public safety awareness
- Greater environmental awareness and concern
- Increasingly litigious society
- Those commissioning surveys often have limited knowledge of the hydrographic profession



The Case for Competency Certification - Advantages

- Competency certification ensures that hydrographic surveys for safety of navigation purposes are carried out by competent professionals
 - Reduces risk
 - Increases certainty
 - Simplifies surveyor justifying credentials
 - Simplifies employer selecting contenders



The Case for Competency Certification - Advantages

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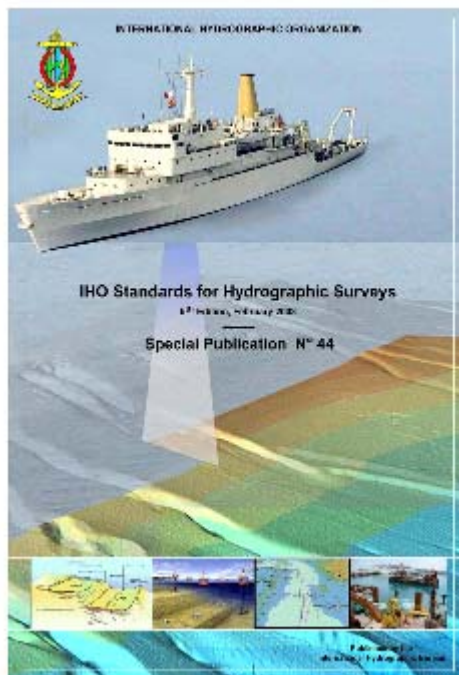


International Standards for Hydrographic Surveys

- The global nature of shipping and seaborne trade is such that common standards need to be applied to the products and services that support it.
- The International Hydrographic Organization is the global technical organisation that does this
- S-44 - IHO Standards for Hydrographic Surveys (5th Edition, Feb 08) free download www.iho.int



S-44



International Standards of Competence

- International Standards of Competence for Hydrographic Surveyors set by FIG/IHO/ICA IBSC - (IHO Publication S-5)

(http://www.iho-ohi.net/iho_pubs/standard/M510thed08.pdf)

- Academic Qualifications – Category A / Category B

Category A Course – A programme which provides comprehensive and broad-based knowledge of all aspects of theory and practice of hydrography and allied disciplines for individuals who will practice analytical reasoning, decision making and development of solutions to non-routine problems.

Category B Course – A programme which provides practical comprehension of hydrographic surveying for individuals with the skill to carry out the various hydrographic surveying tasks.

But these are not competency standards!!



S-5

INTERNATIONAL
FEDERATION OF
SURVEYORS



INTERNATIONAL
HYDROGRAPHIC
ORGANIZATION



INTERNATIONAL
CARTOGRAPHIC
ASSOCIATION



STANDARDS OF COMPETENCE for Hydrographic Surveyors

M-5
Tenth Edition, 2008

Guidance and Syllabus for Educational and Training Programmes

Published by:
The International Hydrographic Bureau
9, rue Alexandre Dumas
B.P. 445
Monaco, MC 98012 Cedex
MONACO
<info@ihob.net>
<www.ihob.net>



What is Competence?

- Competence is a combination of knowledge and sufficient experience that confirms the individual's ability to apply that knowledge appropriately in varying situations

Competence = knowledge + experience

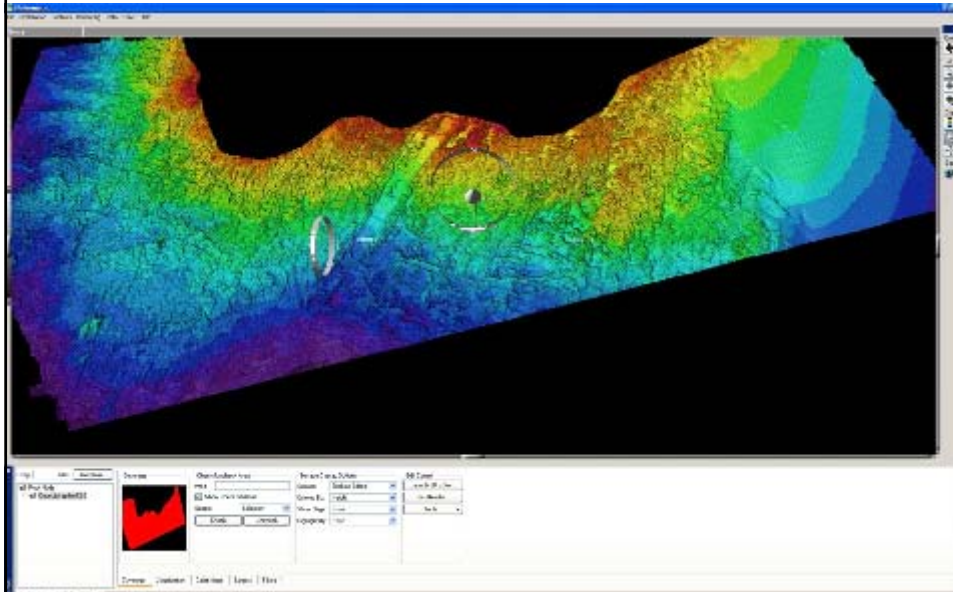


History and Development of the Australasian Hydrographic Surveyors Certification Panel

- 1991 – unanimous call for accreditation pathway from Australasian Hydrographic Society members
- 1992 – concept supported by Institute of surveyors and state surveyors general
- 1994 – Hydrography commission (ISA) formed and tasked to establish and accreditation pathway
- 4 Aug 1994 – Inaugural meeting AHSAP
 - Standards for accreditation aligned with FIG/IHO/ICA guidelines
 - Pathways included academic courses – experience and 'grandfathering'



1x1metre grided MBES: 67million soundings



History and Development of the Australasian Hydrographic Surveyors Certification Panel

- 2001 – AHSAP became AHSCP - 'Certification' under ISA and NZIS
- 2003 – Cat A course established in New Zealand
- 2004 – SSI formed from partial ISA and other spatial professions – AHSCP moved to SSI/NZIS jurisdiction
- 2008 – Grandfathering removed as accademic courses now considered sufficiently available
- 2009 – Amalgamation of SSI and remaining ISA to form SSSI – AHSCP migrated to SSSI/NZIS jurisdiction



AHSCP – Operation

- 6 Members (5 elected + National Hydrographer)
 - All must be level 1 certified
- Term of appointment 2 years, 50% elected annually
- All industry sectors represented:
 - Nautical Charting , Coastal Zone Management, Education, Industrial Offshore Surveying, Education, Private Practice
- 3-4 meetings per year (mainly telecon)
- Key elements are Competence, Currency and CPD
- Two levels of certification – detailed guidelines published

(www.sssi.org.au >Divisions>Commissions>Hydrographic Surveying >Certification)



SSSI website - AHSCP Guidelines

The screenshot displays the SSSI website's 'Hydrography - Specialised Certification' page. The header includes the SSSI logo and navigation links: Home, About, Membership, Professional Development, Events, Awards, Divisions, Resources, and Partners. The breadcrumb trail reads: Home > Divisions > Commissions > Hydrographic Surveying > Certification.

Hydrography - Specialised Certification

Professional Certification in Hydrography is the official recognition by the Surveying & Spatial Sciences Institute (SSSI) and the New Zealand Institute of Surveyors (NZIS) that an individual has met the Certificate's necessary requirements, having their skills and expertise recognised at SSSI's highest level.

The Specialised Certification process requires a professional to be able to demonstrate that an assessment level of expertise has been achieved, including:

- Successful completion of particular level tertiary education in a particular spatial science discipline;
- Achievement of further relevant professional experience;
- Contributions to the profession will also be required.

SSSI Level 1/2/3 members are required to demonstrate and report Professional Professional Development (PPD) as an annual task in line with SSSI and NZIS CPD policy in order to maintain certification.

Specialised Certification Fees

Supporting Documentation for application:

- Guidelines for Specialised Certification in Hydrographic Surveying PDF (2159K) (2nd Ed)
- Application form word (1224K) PDF (1224K)
- English of Nautical Hydrographer/Navigation Paperwork (2004-2004) (Note: To access the logbook, updated to, make your changes (e.g. delete examples, add 7 minutes work etc.) then print & sign to enable the form fill process.
- Reference Report word (1425K) PDF (1875K)
- R-3 Awarded & National Mark PDF (1209K)
- Applicant Checklist word (1204K) PDF (1224K)

Please send completed applications to the AHSCP Secretary -

AHSCP Secretary
 Australian Hydrographic Office
 (02) 9550 1234

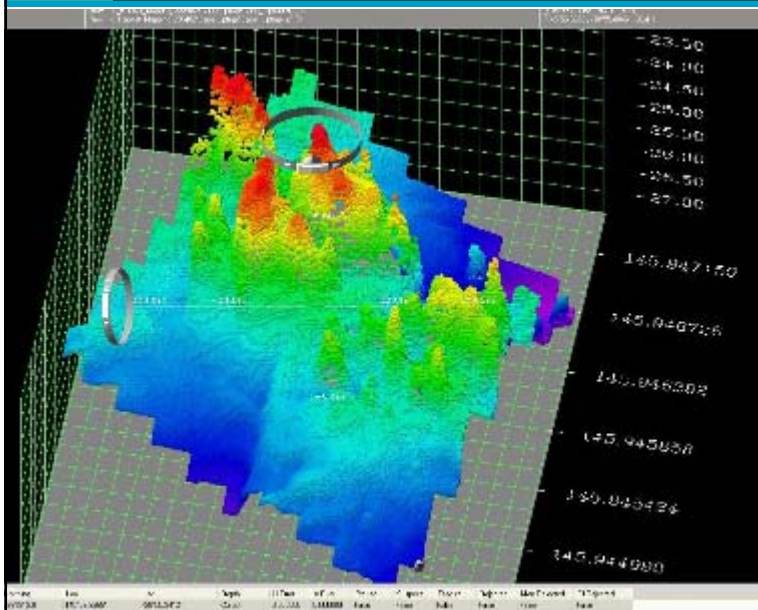
On the right side of the page, there is a list of SSSI regions: RARS QLD, SSSI NSW, SSSI ACT, SSSI SA, SSSI VIC, RARS WA, SSSI NT, SSSI TAS, RARS NT. Below this is a 'Platinum Plus Partner' logo and a 'Home' button.

AHSCP – History of Certifications

Applications:	Sub Total			Breakdown of Foreign Applications										
	Australia	New Zealand	Foreign	Bangladesh	Canada	Finland	Hong Kong	Italy	Peru	Singapore	South Africa	UK	USA	
Certified at Level 1	118	95	7	17	1	4	1	1		2	4	4		
Certified at Level 2	45	31	7	7		1	2				2	1	1	
Under Review (pending submission of additional information)	16	5	1	10			2				1	7		
Not eligible	6	3	2	1					1					
Total	185	134	17	35	1	1	8	1	1	1	2	7	12	1



Gratuitous Colour 3D image of exciting Shoal



SSI website – List of certified Hydrographic Surveyors

NAME	CONTACT	MEMBERSHIP NO.	DATE OF EXPIRES	STATUS	CERTIFICATION TYPE	ISSUED	EXPIRES	ISSUE NO.
ADAMSON, John	08 9437 1111	10010	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10010
ADAMS, Robert	08 9437 1111	10011	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10011
ADAMS, Robert	08 9437 1111	10012	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10012
ADAMS, Robert	08 9437 1111	10013	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10013
ADAMS, Robert	08 9437 1111	10014	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10014
ADAMS, Robert	08 9437 1111	10015	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10015
ADAMS, Robert	08 9437 1111	10016	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10016
ADAMS, Robert	08 9437 1111	10017	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10017
ADAMS, Robert	08 9437 1111	10018	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10018
ADAMS, Robert	08 9437 1111	10019	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10019
ADAMS, Robert	08 9437 1111	10020	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10020
ADAMS, Robert	08 9437 1111	10021	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10021
ADAMS, Robert	08 9437 1111	10022	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10022
ADAMS, Robert	08 9437 1111	10023	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10023
ADAMS, Robert	08 9437 1111	10024	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10024
ADAMS, Robert	08 9437 1111	10025	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10025
ADAMS, Robert	08 9437 1111	10026	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10026
ADAMS, Robert	08 9437 1111	10027	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10027
ADAMS, Robert	08 9437 1111	10028	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10028
ADAMS, Robert	08 9437 1111	10029	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10029
ADAMS, Robert	08 9437 1111	10030	21/06/2010	1	Hydrographic	1/06/2010	30/06/2010	10030

AHSCP – National Adoption and Acceptance

The AHSCP certification scheme has been agreed by all Maritime Authorities and Surveyors General of the Australian States (NT pending) as the competency standard for hydrographic surveyors undertaking safety of navigation surveys.

The use of AHSCP certified surveyors has been specified in :

Principles for Gathering & Processing Hydrographic Information in Australian Ports (http://www.portsaustralia.com.au/whats_new/article.php?id=4)

Standards for Hydrographic Surveys within Queensland Waters (<http://www.msq.qld.gov.au/Waterways/Hydrographic-survey-standards.aspx>)

'Guidelines for Hydrographic and Geotechnical Data' – NSW Maritime (http://www.maritime.nsw.gov.au/docs/policy/Hydrographic_%20geotechnical_data_guidelines.pdf)

Maritime Safety New Zealand - Guidelines – Good Practice for Hydrographic Surveys in NZ Ports and Harbours (<http://www.maritimenz.govt.nz/Publications-and-forms/Commercial-operations/Ports-and-harbours/Hydrographic-surveys-guidelines.pdf>)



AHSCP – International Recognition

- Adopted as a national standard for Finland
- Gaining recognition in South Africa
- AHSCP is applying to FIG/IHO/ICA IBSC for formal recognition of the certification scheme



What does competency certification do for you?

- **The hydrographic surveyor**
 - Simplifies the substantiation of your credentials
 - Provides a portable, externally authenticated evidence of your competence
 - Provides public, global visibility of your competence and currency (SSSI website)
- **The employer / contracting authority**
 - Ensures you are employing a competent professional – reducing you risk
 - Saves you time and effort in individually assessing and verifying the credentials of all applicants
 - Simple single web point of reference to check competence and currency



What does competency certification do for you?

- **The Regulator**
 - Enables you to set simple standards to manage risk
- **The Customer**
 - Increases your confidence in a quality product
 - Reduces your risk



Original embossed seal

Highlights CPD requirement

Summary

- The AHSCP certification programme has already made a significant contribution towards ensuring that the hydrographic surveys critical to safety of navigation and marine exploration are conducted by competent professionals, thus reducing risk of incident and promoting marine safety and environmental protection.
- The AHSCP supports and protects maritime authorities (by ensuring that work is done by a competent professional), employers and contractors (by reducing their overheads in assessing the experience and qualifications of their prospective job applicants) and hydrographic surveyors themselves (by providing a credible system that certifies their competency).



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