



SAFETY FIRST: THE IADC SAFETY AWARD

Safety is an ongoing, primary focus throughout the entire dredging industry. And as in all other professional areas of expertise, the members of the International Association of Dredging Companies (IADC) pride themselves on being at the forefront of safety awareness. Leading by example, IADC expects adherence to rigorous standards for their member companies, all of which are constantly striving for the highest quality performance possible.

This attention to safety starts with regular audits conducted by trained company employees, as well as external audits by Lloyds Register Quality Assurance and other auditing organizations throughout the world. Safety standards are applied through every phase of the project, paying close attention to the safety of ships, crews and all other personnel. All ships, operations and offices must comply with the strictest of international standards regarding quality, health, safety and environment, such as, for instance,

- ISO 9001 for the execution of quality assurance
- ISO 14001 for the execution of environmental protection;
- VCA & OHSAS for the execution of occupational health and safety.

- ISM for the execution of safety at sea and marine-environmental protection;
- ISPS for the execution of security on vessels.

Although each and every member company strives for a perfect safety record, the importance of these high quality standards has led the IADC Board of Directors to present an annual "Safety Award" within the IADC membership. This award will recognise the exceptional safety performance of a particular company, project or ship.

The IADC Safety Award, for outstanding achievement in the area of safety, is intended "to encourage the development of safety skills on the job and to reward those people and companies demonstrating special diligence in safety awareness in the performance of their profession". Companies are asked to recommend a project or ship for the Safety Award, and the IADC Board of Directors then chooses the recipient based on a thorough evaluation.

Above, Part of the project awarded the first IADC Safety Award, Tuas View Extension increased the land area of Singapore by 920 ha.

AWARD-WINNING PROJECT

In 2007 this award was presented to the project "Reclamation of Jurong Island (Phase 4) and Tuas View Extension (Option 2-1)" in Singapore (above and Figure 1). The client is Jurong Town Corporation and the S\$3.5 billion contract runs from June 30 2000 through May 29 2008. Penta-Ocean Construction Co. Ltd. is the lead partner within a joint venture that includes Dredging International NV, Boskalis International BV, Van Oord (formerly HAM bv) and Koon Construction & Transport Co Pte Ltd.

The project involves a 1,454 hectare reclamation area with 523 million m³ reclaimed sand volume and 30 million m³ sandkey dredging volume. The length of the shore protection is 24, 420 m using 1.7 million m³ stone. The project includes 24.5 million m³ dredging works (the fairway), VLCC jetty of 320,000 DWT x 2 Nos. (-25m), and a pipeline system 50" x 50" with a length of 7500 m (Figure 2).

The award was based on the findings and results of the last audit report by an external independent auditor for the Safety Management System of this project.



Figure 1. Work on Jurong Island (Phase 4) Reclamation. Seven existing islands were linked up to create one large island, which increased the land area of Singapore by 540 ha.

Through this audit, the following items were judged to have been properly carried out and effectively adopted throughout the lifespan of the project:

- Safety policy were set down in clear and unambiguous terms;
- Safe work practices ensured that all works were carried out in the same manner so as to eliminate or minimise incidents;
- Safety training equipped the employees at all levels with the knowledge, skills and attitudes enabling them to perform their duties in a safe and efficient manner;
- Group meetings were used as an effective communication tool for safety, health message, information and knowledge of the employees;
- Comprehensive incident investigations and analyses established causes of incidents so as to prevent recurrence;



Figure 2. Map of Singapore showing Jurong Island and the Tuas Peninsula, which are located in the southwest corner of Singapore.

- In-house safety rules and regulations ensured that all employees knew their obligations and responsibilities and complied with the rules and regulations;
 - Safety promotion developed and maintained safety awareness amongst all employees;
 - Evaluation, selection and control of subcontractors ensured that the subcontractors were aware of safety obligations and that only those subcontractors were employed who could meet such obligations;
 - Safety inspection verified the safety provisions and practices conform the rules and regulations and relevant statutory requirements;
 - Maintenance regime ensured that all hand tools, machinery and equipment were regularly maintained;
 - Control and use of hazardous chemicals ensured proper storage, movement use and disposal of hazardous substances and chemicals minimising occurrence of incidents;
 - Emergency preparedness and response ensured that emergency situations were properly and effectively managed to minimise loss;
 - Occupational health programmes protected workers from health hazards relevant to the construction industry.
- According to the IADC Board, this project adopted the best technology for enhancing

overall safe operations. The Board also assessed that attention to training gave personnel a good general knowledge on matters of safety and proper operational skills. Furthermore, the figures in the safety record (Figure 3) reveal an excellent record for this project.

Through the presentation of an annual Safety Award, the IADC Board of Directors hopes to emphasise, both to their member companies and the public at large, the IADC's concern for safety, environment and the maintenance of the strictest quality standards. This attention to safety contributes to better performance and higher efficiency – and ultimately to greater client satisfaction.

YEAR 2006												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Month Manhours	64,480	63,840	73,470	108,460	114,851	108,735	113,553	124,839	110,000	88,869	78,646	90,089
Acc. Manhours	8,563,277	8,627,117	8,700,587	8,809,047	8,923,898	9,032,633	9,146,186	9,271,025	9,381,025	9,469,894	9,548,540	9,638,629
Lost Mandays	0	0	0	0	0	0	0	0	0	0	0	0
Acc. Lost Mandays	255	255	255	255	255	255	255	255	255	255	255	255
Reported Accidents	0	0	0	0	0	0	0	0	0	0	0	0
Reported Incidents	0	0	0	0	0	0	0	0	0	0	0	0
Fatal Accidents	0	0	0	0	0	0	0	0	0	0	0	0
Acc. Reported Acc.	9	9	9	9	9	9	9	9	9	9	9	9
AFR	1.05	1.04	1.03	1.02	1.01	1.00	0.98	0.97	0.96	0.95	0.94	0.93
ASR	29.78	29.56	29.31	28.95	28.57	28.23	27.88	27.51	27.18	26.92	26.71	26.46

YEAR 2007								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Month Manhours	79,229	58,696	69,047	65,628	60,709	65,406	73,260	68,805
Acc. Manhours	9,717,858	9,776,554	9,845,601	9,911,229	9,971,938	10,037,344	10,110,604	10,179,409
Lost Mandays	0	0	0	0	0	0	0	0
Acc. Lost Mandays	255	255	255	255	255	255	255	255
Reported Accidents	0	0	0	0	0	0	0	0
Reported Incidents	0	0	0	1	0	0	0	0
Fatal Accidents	0	0	0	0	0	0	0	0
Acc. Reported Acc.	9	9	9	9	9	9	9	9
AFR	0.93	0.92	0.91	0.91	0.90	0.90	0.89	0.88
ASR	26.24	26.08	25.90	25.73	25.57	25.41	25.22	25.05

Figure 3. Monthly Safety Statistics 2006/2007.