

Bahrain Brain Strain

STEPHEN COUSINS found his dredging knowledge pushed to its limits at the 27th IADC International Seminar on Dredging and Reclamation



Having notched up over two years as assistant editor for dredging's top trade title, I thought I had the industry sussed...

Despite all the technological intricacies of this hugely important global business, it's basically just a matter of shifting material from one location to another, right? – that was my attitude.

So it was with some degree of confidence, even complacency, that I made my way to the **International Association of Dredging Companies' (IADC) 27th International Seminar on Dredging and Reclamation**, which took place at the Gulf Hotel in sunny Manama, Bahrain, from November 11-15, 2006.

Just attend a few lectures, then pick up my certificate I thought – I couldn't have been more wrong!

Planned as part of IADC's ongoing effort to disseminate information about dredging and reclamation, the seminar aims to provide future decision-makers and their advisors in governments, port and harbour authorities and other organisations with the practical

knowledge to help improve their understanding of the contractual requirements of dredging projects.

Starting with the dredging 'basics' – including its uses, equipment types and project phasing – the course would culminate with participants working in teams to submit a full-blown tender document detailing the complete technical scope of works and financial breakdown for a hypothetical dredging project in Honduras.

EXPERIENCE COUNTS

November's seminar brought together 14 participants from countries the world over, including the UK, Nigeria, Holland, the Republic of Georgia, the Maldives and Iraq. As you might expect, Bahrain was the best represented and several government officials made an appearance. Imparting their considerable knowledge and experience were our lecturers – four top experts in the field, representing the world's largest dredging contractors:

◆ As a senior project manager with Royal Boskalis Westminster, seminar co-ordinator **Frans Uelman** is currently

responsible for managing all technical and environmental preparation work related to Melbourne's Channel Deepening Project

◆ **Philip De Nys** is chief operations superintendent of dredging activities at Jan De Nul

◆ **Kees Peerlkamp** is Van Oord's manager of dredging courses & training, and

◆ **Ruud van Maastrigt** works at Boskalis' head office, where he's responsible for production estimates, tender submissions and production control for projects in North and South America, the Far East and Australia.

TEAM WORK

The Gulf Hotel's plush air-conditioned rooms provided the ideal venue for the seminar and a welcome sanctuary from Bahrain's hot climate. After brief introductions by Frans Uelman and IADC project manager Frans-Herman Cammel, Ruud van Maastrigt kicked off Day One with a general overview of dredging, asking the fundamental questions: what is it and why do it? After explaining capital dredging and its applications for navigation, infrastructure, coastal engineering and the mining and offshore industries, he detailed factors affecting maintenance dredging requirements.

Even at this early stage of proceedings I was learning new things, as Ruud explained that navigation channels might need dredging simply because



Participants enjoy a tour of HAM 309 during the site visit



The winners – all that hard work finally paid off!



Frans Uelman and Ruud van Maastrigt talk with an official during the site visit



A colourful tent was erected on the sand for the special evening dinner

a ship sinks deeper in the water when traveling at speed – news to me!

Frans Uelman then introduced the first seminar workshop, an immensely enjoyable activity that saw participants working together in teams and also getting better acquainted. In the first task, we were presented with a map of Honduras' Puerto Cortés and the surrounding region and asked to identify potential dredging projects based on information on port expansion requirements, contaminated sites, tourist activity and other factors.

That afternoon, Ruud's lecture introduced the basics of project phasing, highlighting the huge importance of site investigation to a project's success – "double the effort pays" he recited, which turned out to be a recurring seminar theme. This also marked our first introduction to the tendering procedure, whose main aspects include: tendering, design and engineering, planning and cost estimating, legal and financial aspects, documentation and the final submission.

The day's second workshop task saw us return to Puerto Cortés, where we were told a major port development plus shipping channel expansion were being planned. Taking on the roles of the various interests affected by the project – tourist board, dredging manager, ecologist etc. – we were each asked to argue our corner with the 'director of the Hondurian National Port Authority' (another

seminar participant) and come to a mutually acceptable solution. No fists were thrown, but some very delicate negotiations were required, believe me! Day Two – Kees Peerlkamp's morning lecture on dredging equipment focused on trailers (TSHDs) and cutter suction dredgers (CSDs) and their principal characteristics, parts, dredging installations, working methods, production-limiting factors etc. He also explained how land-based equipment, including bulldozers and pipelines, is deployed during reclamation projects.

SITE VISIT

Kees' lecture served as an appetizer for the afternoon's site visit to Bahrain's immense New Town project where we would see much of what he described in the flesh.

"There's no substitute for the real thing!" Kees had chimed and participants couldn't fail to be impressed by the trip, which included:

- ◆ A detailed explanation of the project by Boskalis Westminster-Van Oord project manager Peter van der Hulst
- ◆ A tour of the 4,600m³ TSHD HAM 309 led by its captain Frank Wuis, and
- ◆ A look at various dry excavation and land-based reclamation works (*see next month's issue for the full story*).

Day Three's first lecture began with an amusing slide depicting the original (vertical) design for the now leaning Tower of Pisa – 'we can save 700 lira by not making soil tests!'

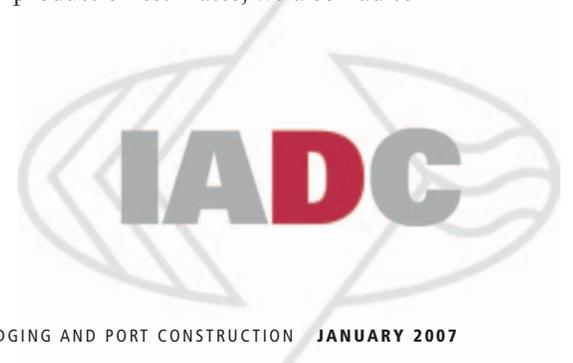
boasted a caricature of the tower's complacent architect.

What better way to underline the importance of a thorough site investigation prior to dredging?

And during the following session, Kees took us through the various aspects of production, explaining how an accurate assessment of soil type will dictate the selection of dredging equipment and therefore the efficiency of production.

The afternoon workshop saw participants attempting to pull together their collective dredging knowledge for the first time in preparation of a dredging tender. Divided into three contracting teams of five, each team was asked to begin detailed preparations for a container terminal reclamation project at Puerto Cortés.

Apart from a method statement outlining the proposed equipment, selected borrow areas, means of transporting material to the reclamation, plus various time / production estimates, we also had to





To our surprise a trailer pulled up next to us during the specially-organized dinner



Bahrain's the subject of huge investment and construction activity



Constantijn Dolmans thanks the lecturers

prepare questions for a pre-bid meeting the following day.

“Failure to attend this meeting will mean automatic disqualification!” Frans Uelman – now playing the part of the local port authority chief – warned us sternly.

SURREAL EXPERIENCE

That evening, participants were momentarily relieved of their dredging responsibilities to enjoy an exotic night's entertainment. To our great surprise, we were driven back to the reclamation site we'd visited the previous day where a huge tent had been erected on the sand.

Decked out with lush carpets and drapes and filled with the aromas of fine local cuisine, this unusual venue also featured a local musician playing the lute and hubble-bubble-style tobacco smoking pipes. Here we were greeted by several Boskalis Westminster-Van Oord employees eager to discuss other developments in the region.

All agreed that the evening's crowning moment came when the trailer *HAM 317* pulled up alongside where we sat and proceeded to offload its cargo into a nearby reclamation. In the dark of night it provided for a strangely moving and surreal experience.

Still energized by the previous night's entertainment, participants began Day Four with Kees Peerlkamp's lecture on surveying techniques during dredging, followed by Philip De Nys' explanation of cost pricing for dredging and reclamation. The latter would prove vital to Day Five's final tender submission, “particularly when working out our profit margins,” one participant cajoled.

After lunch in the hotel's sumptuous buffet restaurant, each team tested the feasibility of their preliminary dredging campaigns at a pre-bid meeting by putting further questions to port authority representatives – played by the lecturers. For some teams, this meant revising their initial plans and for others it meant scrapping them entirely and returning to the drawing board...

In the case of my team, *East Ltd*, an initial plan to borrow sand from a local lagoon using a small trailer had to be revised due to depth restrictions at the lagoon's entrance. Instead, we chose to deploy a large CSD within the lagoon and then pump the sand mixture through 3km of pipeline along the beach to the reclamation. As it turned out, this alteration would prove crucial to our tender.

JUDGEMENT DAY

On Day Five, Philip De Nys' lecture took an in-depth look at dredging contracts, which apart from detailing materials to be dredged, amounts, deadlines and working methods, he said would also often require input from the central government, financing agencies, consultants, sub-contractors and suppliers.

We also learnt that the contract type will generally depend on the relative risk involved for the client and contractor – “the more the risk, the more a contractor can charge for his services,” he warned. Risk is normally included as part of the overall mark-up price, which includes tax, inflation, general overheads and profits as a percentage of the overall project budget estimate.

After fine-tuning and then submitting our tenders – I should mention that some diligent participants stayed up very late preparing them the previous evening – IADC secretary general Constantijn Dolmans gave an informative presentation on the current state of the dredging industry, while lecturers went to an adjoining room to assess our documentation.

Five days into the seminar and I

was a changed man. Gone was my complacent attitude, replaced by a newfound knowledge and respect for the work of a dredging contractor. Through a combination of lectures, a site visit and workshops, I'd had dredging beaten and battered into my ignorant skull. So what, I wondered, was to be my reward?

“Based on our evaluation of your respective tenders, we can announce that the winning contractor is ... (drum roll) ... *East Ltd*, who offered the best technical solution and the lowest price!” announced Frans Uelman.

I couldn't believe it, our team had won! And how proud I felt that this lowly journalist had managed to prove his worth alongside bonafide industry professionals.

FINALLY...

Since 1993, the IADC has regularly run these week-long seminars and, based on my Bahrain experience, I can see why. Apart from providing a great learning opportunity, it's also an ideal chance to make new friends and industry contacts and experience what it might actually be like to work on a tender as a dredging contractor.

“I've been involved in negotiations for a dredging and reclamation project with Boskalis to create another island under our *Safe Island Concept*,” fellow participant Mohamed Imad, spatial planning director of the Maldives Ministry of Planning and National Development, told me a couple of weeks after the seminar. “Initial negotiations stalled just before I left for Bahrain, but thanks to the new knowledge and understanding I've gained, it's now back on track.”

And the next IADC seminar will be held at the Hotel Camino Real in Tampico, Mexico from March 26-30, 2007.

For more information, please contact the IADC Secretariat's Frans-Herman Cammel via email: Cammel@iadc-dredging.com or visit the website at www.iadc-dredging.com

