

Success Stories.....

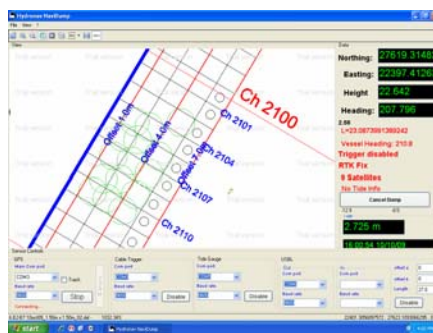
MARINE ROCK PLACING – PPT 3 & 4, SINGAPORE

Customer : OUNG CONSTRUCTION (S) PTE LTD
Project : PASIR PANJANG TERMINAL PHASE 3 & 4 RECLAMATION PROJECT – MARINE ROCK PLACING
Project Date : JULAI 2009

Oung Construction (S) Pte Ltd has been appointed as the sub-contractor for rock placing task for the Pasir Panjang Terminal Phase 3 & 4 reclamation project by Hyundai Engineering & Construction Co. The project is to construct container berths, owned by PSA. The contract for the Pasir Panjang Terminal Phase 3 & 4 reclamation project was awarded to a consortium comprising civil engineering firms Koon Construction & Transport, Penta-Ocean Construction, Hyundai Engineering & Construction and Van Oord Dredging and Marine Contractors. Oung Construction's primary responsibility was to place the support rock on both sides of the caissons after they were placed in the sea by Hyundai Engineering & Construction. An accuracy of centimeter level was specified for the thickness of the seabed rock layer during such operation. The major challenge for Oung Construction was to accurately determine the crane bucket position and depth.



HYDRONAV SERVICES was contracted to supply an integrated complete solution for the above task, which required centimeter precise positions for both horizontal and vertical. Trimble SPS461 RTK GPS Heading Receiver was chosen to allocate the crane bucket position and heading. A Trimble Cable Payout Meter was being installed to monitor the cable in/out between the crane bucket and the top of the boom where one of the RTK GPS antennas was located which providing centimeter resolution for the height/depth value. A customized software, NuviDump was written by HYDRONAV's Software Engineer for interfacing all the above equipments and also able to import/export AutoCAD file. The software could display both the graphical and textural format of the bucket position and height/depth, and the pre-designed dumping position. The software was able to capture the dumping position and record them into the same AutoCAD file, furthermore, the edited file could be exported out for office records.



Two complete systems were installed onboard Oung's Kokunimaru 10 and Hayasaka 6 Crane Barge. The systems offered great accuracy position and depth information, the crane operators were able to accurately and efficiently place rock onto the entire designed locations, precisely meeting design specifications. Despite the challenge of the enormity of the project and the tightness of its schedule, the project is on track to finish on time and accurate thanks to the navigation and positioning solution provided by HYDRONAV.

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