A W A R D S  P R E S E N T A T I O N

At the CEDA Dredging Days held in November 2003, an IADC Young Authors Award was presented to Martin Zwanenburg for his paper ‘The Exploitation of Cockle Shells’.

During the presentation at the closing ceremony of the conference, IADC Secretary General Constantijn Dolmans noted, “Innovation in finding dredging solutions is of the utmost importance. It is a goal that all IADC member companies strive for. We encourage such innovation within our industry, and certainly in the up and coming generation of young researchers. Since research is an integral part of the competitive process, looking outside of the traditional dredging industry can be just as important as looking within. Wherever useful ideas originate, the ultimate aim of dredging is to ensure the expansion of prosperity, with due respect for environmental issues. Dredging plays a significant role in the search for sustainable economic development and papers such as this one are part of the process of stimulating further research and attaining this goal”.

B A C K G R O U N D  O F  T H E  P A P E R

The cockle, which is considered a delicacy in southern European countries, is dredged up by specialised cockle ships. However, the dredging of the cockles leaves tracks on the seabed, resulting in negative public opinion toward the cockle branch. A reduction of these tracks, together with a reduction of the required power and an improvement in cockle quality is desired. The Dutch Producers Organisation of Cockle Fishermen decided to investigate the possibilities of adapting the current design of the cockle-dredging draghead. The research was done at the University of Technology Delft, The Netherlands, Department of Mechanical Engineering.

T h e  c o c k l e  d r a g h e a d

The cockles are fished with special ships equipped with an installation which looks in some respect like the
draghead passes, but instead is sucked up. To achieve improvements the jet water should be minimised and, if possible, the sand that is brought up by the blade should be reduced. For this reason the investigation focussed on the design of the blade in order to achieve the required improvements and minimise tracking on the seabed.

Serrated knives

Several configurations of serrated knives were tested to investigate whether or not it is possible to pick up the cockles, whilst leaving the sand at the bottom. An unexpected difficulty was the phenomenon that, in some configurations, the teeth are blocked by the sand which then pushes the sand forward like a bulldozer blade (Figure 2).

The best results were obtained by a serrated knife consisting of straight round bars, connected to each other at the back end, thus achieving an optimum flow through the serrated knife, with no use of jet water. Though the laboratory results were satisfying, practical application not yet been determined. Extensive tests on site are still required to determine the possibilities for using serrated knives in cockle dragheads.

The entire text of this paper can be found in the Proceedings of the CEDA Dredging Days, November 20-21 2003, Amsterdam.

Figure 2. Configurations of the serrated knives.

The Exploitation of Cockle Shells

Two IADC Young Authors Awards in 2003

Each year, at selected conferences and at other appropriate occasions, the International Association of Dredging Companies grants awards for the best papers written by authors younger than 35 years of age. At each appointed conference or occasion, the Paper Committee is asked to recommend a prizewinner whose paper makes a significant contribution to the literature on dredging and related fields. The purpose of the IADC Award programme is “to stimulate the promotion of new ideas and encourage younger men and women in the dredging industry”. The winner of an IADC Award receives US$ 1000 and a certificate of recognition, and the paper if suitable is then published in Terra et Aqua.

In 2003 two such awards were presented. In September one was presented at the COPEDEC VI held at Colombo, Sri Lanka (see page 14). The second was presented last November at the CEDA Dredging Days in Amsterdam (See opposite page).