



Cutter operator control room

# A new training aid for cutter suction dredger operations

## Introduction

There is an increasing need for training in the field of dredging. On the one hand, dredging equipment is becoming not only more efficient but also increasingly complex. On the other hand it is difficult to find personnel with adequate knowledge and skill for a job as a competent dredger operator.

Regular education at various levels in the field of dredging is available in a number of West European countries including the Netherlands. This ranges from a main subject at university level to basic technical dredger operator training. Generally, however, education facilities of this kind are scarce, and it is common for personnel to find themselves moved from an excavator or suchlike to the cabin of a cutter suction dredger with, if they are lucky, a reasonable technical

education but with no specific knowledge of dredging. They can then expect their "education" to continue in practice by learning from others whose own knowledge of dredging may be inadequate. This is obviously no way to obtain a basic understanding of the dredging process, and the probability that a dredger will be used to the best of its capabilities is virtually zero. Efficient and effective use of a dredger is, however, of the utmost importance in generating a satisfactory return on investment.

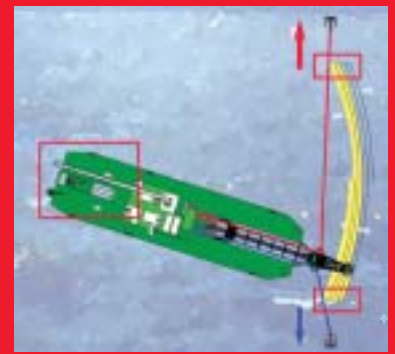
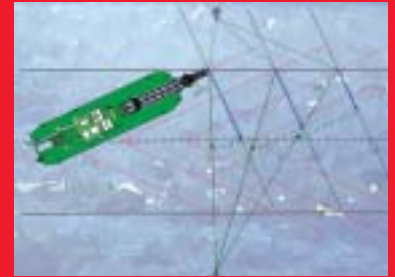
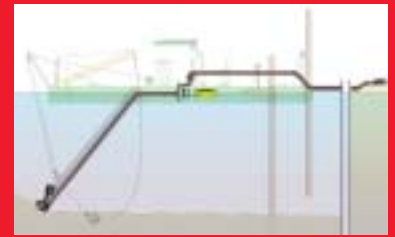
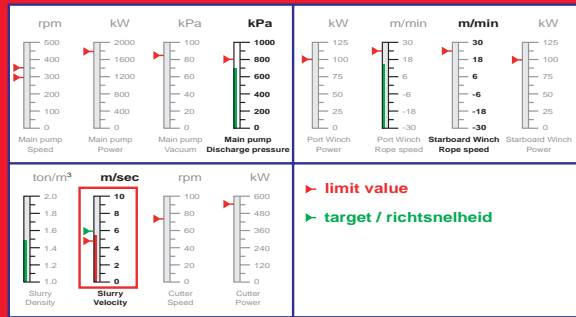
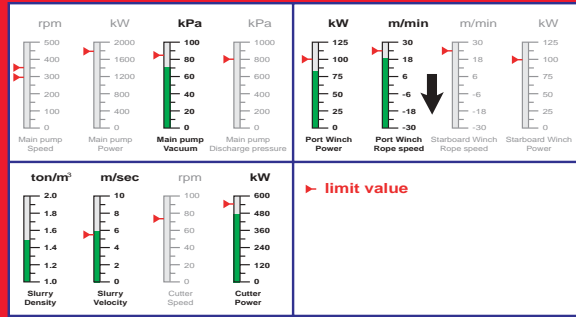
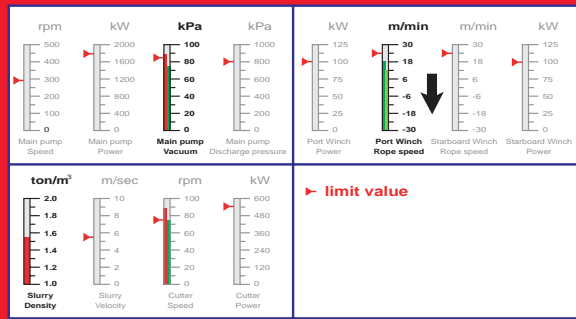
## TID

The Training Institute for Dredging (TID) offers a variety of training facilities. A general dredging course is organised each year for participants from all over the world. This two week course covers all important aspects of dredging. There

are also a number of other regular short training courses, with more to come in the near future. As well as regular courses of this type, which are open to all, individual clients are also offered the possibility of specially adapted or customised courses, on-the-job training, and familiarisation training etc..

## Cutter suction dredger operator training

A new powerful training aid has recently been developed for the training of personnel who have a basic technical education but whose knowledge of (cutter suction) dredging is insufficient to become an efficient dredger operator. This aid consists of a comprehensive training course on CD-ROM. It was developed in collaboration with DEME, a leading international contractor.



TID Cutter operator training



**Step 1:**  
End of swing



**Step 2:**  
Lowering of auxiliary spud





*Practical training cutter operators*



*Instructions*



*Classroom training*

5. Practical operations with a cutter suction dredger, including the choice of working method and dredging pattern, general and special operational aspects, such as anchorage, breaking-in, slope dredging and the presence of obstructions.

The CD-ROM can be used in three ways:

- By starting at the beginning and running through the complete training course, which would take approximately 3½ hours.
- By selecting the subjects in any sequence the user desires (this is made easy by hyperlinks to related subjects)
- As a tool to be used by a trainer in the presentation of selected topics.

The training can be followed in either the Dutch or English language. Use is made of spoken word, pictures, diagrams and graphs, video fragments and animations.

### **Content of the training course**

The training course consists of the following five chapters:

1. An introduction, explaining the dredger characteristics, its major components, the dredging subprocesses and how the dredger functions.
2. Basic theory, covering soil mechanics, hydraulics, drives and dredge pumps.
3. A detailed discussion of the dredging subprocesses: the cutting of soil, the picking up of the soil (mixture formation), the suction process and the "long" distance transport by pipeline.
4. The interaction of the dredging subprocesses, including a discussion of the factors that limit production of the various subprocesses and how to achieve optimum production.

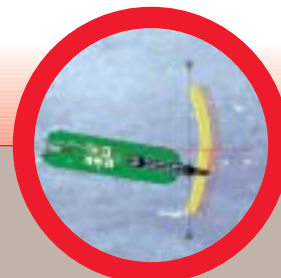
The above interactive training aid makes it possible to significantly improve the understanding of essential aspects of dredging in a very short time. This will enable inexperienced dredger operators (and others involved in cutter suction dredger operations) to develop their skills faster and to a higher level.

For additional information, please contact TID, fax: +31 (78) 691 03 31. E-mail: [training@mtiholland.com](mailto:training@mtiholland.com)

**Step 3:**  
Retracting spud carrier



**Step 4:**  
Lowered working spud



**Step 5:**  
Resume swinging operation