

Other Hydraulic and coastal engineering programmes available from Aalborg University:

AwaSys

AwaSys is a Windows® program for 2D wave generation and active wave absorption. In addition to regular waves, waves can be made according to a variety of irregular wave spectra. Two different techniques of wave generation syntheses are implemented:

- Random phase method
- White noise filtering method

AwaSys allows the user to perform wave generation synthesis as well as reflection analysis simultaneously with running active wave absorption.

A wave generation can be saved to file for later replay. Hereby different model setups can be exposed to the exact same wave series

WaveLab

WaveLab is a Windows® program for data acquisition and analysis in wave laboratories. WaveLab features a graphical user interface, which makes WaveLab very easy to use. WaveLab includes several useful tools for planning, performing and analyzing experiments.

The following tools are available in WaveLab:

- Data Acquisition
- Band pass and Average filtering
- Simple calculations (Surf Similarity, Shoaling, Wave Kinematics, SPM Hind cast, Standard Spectra, Spreading Converter)
- Time Series Analysis (Wave elevations, Forces and Run-Up/Run-Down, Reflection, 3D Wave)



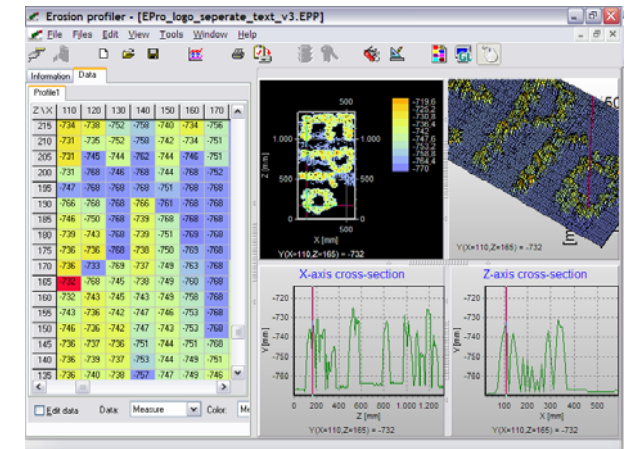
<http://hydrosoft.civil.aau.dk/>
HYDRAULICS & COASTAL ENGINEERING LABORATORY

AALBORG UNIVERSITY
 DEPARTMENT OF CIVIL ENGINEERING
 WWW.CIVIL.AUC.DK

SOHNGAARDSHOLMSVEJ 57, DK-9000 AALBORG DENMARK
 TELEPHONE +45 96 35 80 80 TELEFAX +45 98 14 25 55

EPro 1

Non-contact erosion profiling



EPro 1

Epro 1 is a Windows® program designed to measure the same surface multiple times and track changes due to erosion.

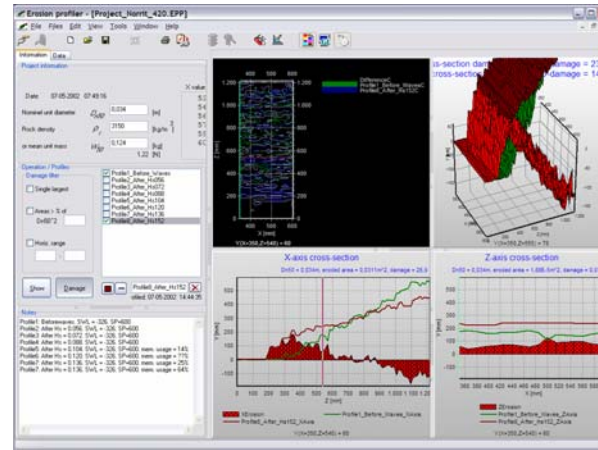
The purpose of Epro is to automate the measuring of profiles in order to save manpower and to increase the number of possible measuring points. Measurements are carried out in a non-contact way and are not hindered by the presence of water.

The measuring is carried out by a profiler powered by servomotors and controlled by EPro.

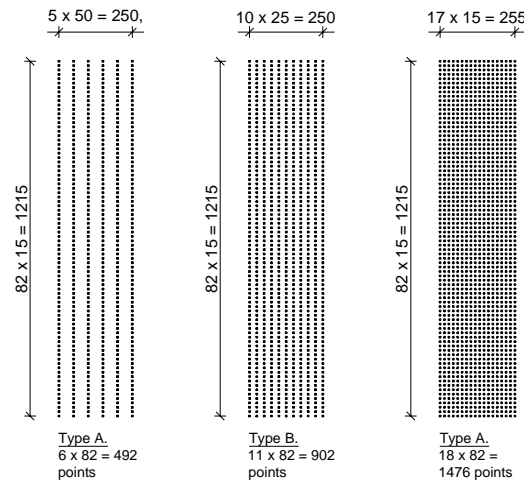


In order to avoid slipping, tooth belts are used for power transmission, hereby ensuring precision.

EPro was initially programmed to measure erosion effects on rubble mound breakwater models and has a built-in damage calculation processing for this purpose. However, any type of model can be measured within surface limitations of laser measurement and movement limitations of the profiler.



Profiling is done by setting up a grid of measure points, e.g.:



The required density of measure-points depends on the required precision of the current project. The highest possible density is 1mm between measuring points (or whatever unit the program is calibrated to support). Since a high-density grid takes longer to profile, grid density will typically be

a compromise between speed and precision, to help obtaining the optimum compromise EPro has 4 grades of movement speed and 16 different routes it can follow.

While profiling, the measurements are presented graphically in real-time. Hereby errors are easily detected and the profiling can be aborted if the measurements are flawed. In such case, it is possible to manually remove the last measurements and restart the profiling from a previous state.

After profiling, the results can be inspected in EPro in tabular and graphical form. EPro offers some basic processing, editing and graphing capabilities. To ease further processing in other programs, EPro offers export facilities supporting a wide range of data and graphics formats.



For additional information, please check the contact information on the back of this brochure.