Unconsolidated Core Sampling©

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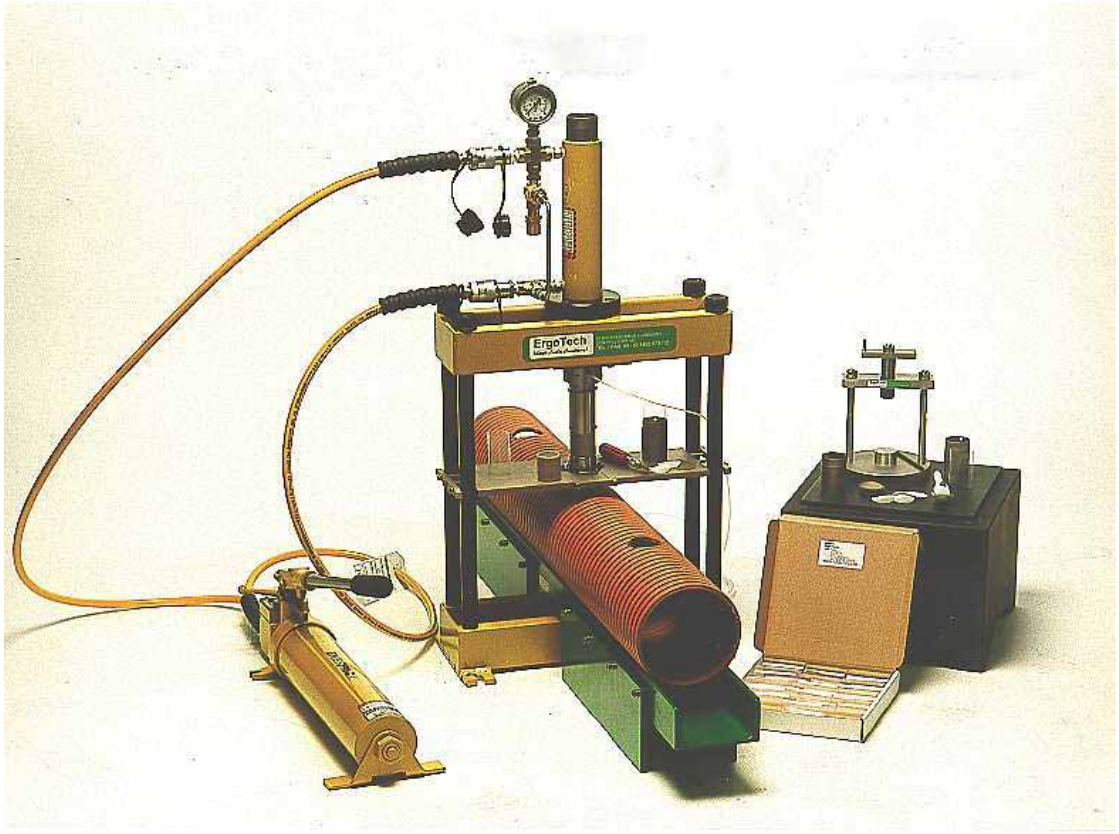

The ErgoTech procedure, using a thin wall section **precision plunge cutting tool** is a specific innovation when undisturbed unconsolidated sediment samples are required

The **key element of the design** is a removable cutting shoe fitted with and expandable collet type plastic core catcher and a precision pre-formed FEP heatshrink liner in a core collection tube.

During the course of the plunging action a small (not normally greater than 2 to 3 bar air pressure) controlled axial stress can be applied to **improve the cohesion of the sediment** in the plunge cutter as it is **not** allowed to dilate vertically. The limitation of the technique relates to the grain size distribution of the sediment.

Thus very large grains in excess of Ø1 mm and heterogeneous streaks with small pebbles would cause problems **due to the necessary forces** exerted on the thin wall tube assembly and the disturbance of pushing larger particles ahead of the cutting shoe.

The available plunging force is probably 10 to 20 times the necessary, so it is that the dimensional stability of the cutting tool is the limiting factor of the technique.

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