The essentials of the Sandbox

Method of positioning and aligning bridge deck

(Civil Engineering)

The sandbox is a temporary wedging device placed between a bearing element and the bridge deck. It consists of a metal box filled with dry sand with a hatch or a drain hole.

This simple and robust method does not require a complex hydraulic system.

In the setting up of a bridge deck, the sandbox is a controlled descent device allowing to gradually transfer the weight of the deck from shoring to the final supports by emptying sand contained in the wedging box(s).

1) Principle

The principle is simple:

- The bridge deck is temporarily placed on the sandbox(es)
- To lower the bridge deck and place it on its final supports, we let the sand escape gradually
- The escape of sand causes a controlled descent of the bride deck.

This allows a fine and gradual adjustment of the vertical position thanks to:

- A slow lowering
- A mastery of the transfer of charges
- The avoidance of sudden shocks or efforts

2) What are the sand's key specifications to respect?

The sand must allow effective compaction and smooth flow.

- The sand must have a granulometric curve that facilitates flow
- The sand must not have a granulometry that would lead to a compacting effect.
- Its water content must always be less than 2%. The method is sensitive to the **moisture of the sand,** which also requires protecting the sandbox from possible water ingress.

3) The best of the sand SNL

The S.N.L has developed with the operators of large temporary infrastructure projects, a sand that meets the technical requirements specific to sandboxes (civil engineering)

The sand is a natural siliceous type whose constituent grains of these sands are rounded in shape.

The sand is washed and dried with a humidity of less than 0.2%. The sand is delivered in a 25kg bag protected by a polyethylene cover to keep the sand dry.

Its granulometric curve is adapted to avoid any compaction effect as soon as the sandbox is correctly sized.