top part, so as to prestress the diaphragm wall.

The production of the diaphragm wall is completed by the injection of a cement grout into the ducts receiving the prestressing tendons.

Such a prestressing of the diaphragm wall allows the thickness thereof to be reduced for the same strength (compared to a diaphragm wall without prestressing tendons).

Nonetheless, the method of manufacture described hereinabove is complex to carry out, since it requires the placement of the ducts forming prestressing channels, the prestressing tendons, the anchoring of these tendons and the injection of cement grout into the prestressing ducts.

Another drawback concerns the uncertain quality of the anchorage, connected to the possible heterogeneities in the concrete which can comprise localised defects such as water, drilling mud or soil inclusions.

Moreover, the prestressing tendons are subjected to external attacks, in particular corrosion, and local corrosion of the tendons is not uncommon before the placement and full hardening of the concrete and grouting, this corrosion significantly affecting the capacity and safety of the wall.

The purpose of the invention is to at least partially overcome these drawbacks.

For this purpose, according to an aspect, the present disclosure relates to an anchor device for a prestressed diaphragm wall, comprising at least one prestressing reinforcement and a sleeve encasing said at least one prestressing reinforcement and forming an anchorage for said at least one prestressing reinforcement in the diaphragm wall, a length of the anchor sleeve being strictly less than a length of said at least one prestressing reinforcement, the anchor sleeve comprising a sealing material disposed in such a way as to coat each prestressing reinforcement, the anchor device

comprising a corrosion-resistant coating of each prestressing reinforcement over the entire length of the prestressing reinforcement. The method of manufacturing

the prestressed diaphragm wall is simplified, since the anchor device is prefabricated.

Thus, thanks to the anchor device according to the present disclosure, the method of manufacturing the diaphragm wall is simplified, since the anchor device is prefabricated.

According to an example, the anchor device according to the present disclosure further allows an anchorage and an effective tensioning of each prestressing reinforcement to be produced.

Moreover, each prestressing reinforcement is protected from corrosion, including during the manufacture of the diaphragm wall.

According to another example of the present disclosure, the corrosion-resistant coating comprises a duct for protecting the prestressing reinforcement in a part of the prestressing reinforcement disposed outside of the sleeve.

According to another example of the present disclosure, the corrosion-resistant coating comprises a material for coating the prestressing reinforcement in a part of the prestressing reinforcement disposed outside of the sleeve.

According to another example of the present disclosure, the corrosion-resistant coating of the sealing part comprises the sealing material disposed in contact with the prestressing reinforcement in the sleeve.

According to another example of the present disclosure, the sleeve comprises an outer surface provided with rough areas.

According to another example of the present disclosure, the rough areas are formed by ringed ridges and/or ribs.

According to another example of the present disclosure, the device comprises a duct encapsulating a sheath of the anchor sleeve.

According to another example of the present disclosure, said at least one prestressing reinforcement comprises a plurality of wires spread out and bent back on themselves in the anchor sleeve.

According to another example of the present disclosure, the sealing material is a mortar, for example of the ultra-high performance fibre-reinforced type or a cement grout.

According to another example of the present disclosure, the length of the anchor sleeve lies in the range 2% to 50% of the length of the prestressing reinforcement, preferably in the range 2% to 20%.

According to another example of the present disclosure, the device comprises a sealed plug in an overlap zone between a part of said at least one prestressing reinforcement in the anchor sleeve and a part of said at least one prestressing reinforcement outside of the anchor sleeve.

According to another aspect, the present disclosure further relates to a prestressed diaphragm wall comprising at least one anchor device as described hereinabove, wherein the anchor sleeve is sealed at a portion of the diaphragm wall.

According to another aspect, the present disclosure further relates to a method of manufacturing a diaphragm wall, comprising:

- a step of excavating in the ground,

- a step of inserting, into the excavation, a reinforcement cage provided with at least one anchor device as described hereinabove,

- a step of pouring concrete into the excavation provided with the reinforcement cage and with said at least one anchor device,

- a step of tensioning each prestressing reinforcement of said at least one anchor device.

Other features and advantages of the invention will appear upon reading the following description, which is given for illustrative purposes only and must be read with reference to the accompanying drawings, in which:

- Fig. 1 shows a longitudinal sectional view of a prestressed diaphragm wall according to a first embodiment of the invention;

CLAIMS

1. Anchor device for a prestressed diaphragm wall, comprising at least one prestressing reinforcement and a sleeve encasing said at least one prestressing reinforcement and forming an anchorage for said at least one prestressing reinforcement in the diaphragm wall, a length of the anchor sleeve being strictly less than a length of said at least one prestressing reinforcement, the anchor sleeve comprising a sealing material disposed in such a way as to coat each prestressing reinforcement, the anchor device comprising a corrosion-resistant coating of each prestressing reinforcement over the entire length of the prestressing reinforcement.

2. Anchor device according to the preceding claim, wherein the corrosion-resistant coating comprises a duct for protecting the prestressing reinforcement in a part of the prestressing reinforcement disposed outside of the sleeve.

3. Device according to one of the preceding claims, wherein the corrosion-resistant coating comprises a material for coating the prestressing reinforcement in a part of the prestressing reinforcement disposed outside of the sleeve.

4. Device according to the preceding claim, wherein the corrosion-resistant coating of the sealing part comprises the sealing material disposed in contact with the prestressing reinforcement in the sleeve.

5. Device according to one of the preceding claims, wherein the sleeve comprises an outer surface provided with rough areas.

6. Device according to the preceding claim, wherein the rough areas are formed by ringed ridges and/or ribs.

7. Device according to one of the preceding claims, comprising a duct for encapsulating a sheath of the anchor sleeve.

8. Device according to one of the preceding claims, wherein said at least one prestressing reinforcement comprises a plurality of wires spread out

and bent back on themselves in the anchor sleeve.

9. Device according to one of the preceding claims, wherein the sealing material is a mortar, for example of the ultra-high performance fibre-reinforced concrete type or a cement grout.

10. Device according to one of the preceding claims, wherein the length of the anchor sleeve lies in the range 2% to 50% of the length of said at least one prestressing reinforcement, preferably in the range 2% to 20%.

11. Device according to one of the preceding claims, comprising a sealed plug in an overlap zone between a part of said at least one prestressing reinforcement in the anchor sleeve and a part of said at least one prestressing reinforcement outside of the anchor sleeve.

12. Prestressed diaphragm wall comprising at least one anchor device according to one of the preceding claims, wherein the anchor sleeve is sealed in a portion of the diaphragm wall.

13. Method of manufacturing a diaphragm wall, comprising:

- a step of excavating in the ground,

- a step of inserting, into the excavation, a reinforcement cage provided with at least one anchor device according to one of claims 1 to 11,

- a step of pouring concrete into the excavation provided with the reinforcement cage and with said at least one anchor device,

- a step of tensioning each prestressing reinforcement of said at least one anchor device.