CLAIMS

WHAT IS CLAIMED IS:

1. A manufacturing method of a highly chemical-resistant concrete structure by a centrifugal molding machine, the manufacturing method comprising:

a concrete-layer formation step of supplying concrete into a formwork of the centrifugal molding machine so as to form a concrete layer through centrifugal molding, thereby to compact a formed concrete layer;

an inner-protective-layer formation step of supplying a mixed material not containing any cement-based binder (A) but containing a binder (B) having latent hydraulic property or pozzolanic reactivity no to be hardened merely by mixture with water but to be hardened by a sludge component discharged to an inner surface of the concrete layer and a fine aggregate (C), to the inner surface of the concrete layer so as to form an inner protective layer and the concrete layer through centrifugal molding during compaction of the concrete layer prior to being hardened, thereby to form integrally the inner protective layer and the concrete layer; and

an inner-protective-layer hardening step of allowing the mixed material without any cement-based binder (A) to be chemically combined with the sludge component discharged to the inner surface of the concrete layer, thereby to harden the inner protective layer.

2. The manufacturing method of the highly chemical-resistant concrete structure as claimed in claim 1, wherein

the mixed material in a dry state not containing any cement-based binder (A) but containing the binder (B) and the fine aggregate (C) is supplied to the inner surface of the concrete layer during being formed through centrifugal molding.

3. The manufacturing method of the highly chemical-resistant concrete structure as claimed in claim 1, wherein

the mixed material in a paste not containing any cement-based binder (A) but containing the binder (B), the fine aggregate (C), and kneading water is supplied to the inner surface of the concrete layer during being formed through centrifugal molding.

4. The manufacturing method of the highly chemical-resistant concrete structure as claimed in any one of claims 1 to 3, wherein

the binder (B) is at least one type selected from a group consisting of ground granulated blast-furnace slag, fly ash, silica fume, volcanic ash, silicate clay, and diatomaceous earth.

5. The manufacturing method of the highly chemical-resistant concrete structure as claimed in any one of claims 1 to 3, wherein

the fine aggregate (C) for the inner protective layer to be supplied to the inner surface of the concrete layer is at least one type selected from a group consisting of slag-based fine aggregate, silica sand, and natural fine aggregate.