CLAIMS

1. A sealed tank wall, for storage of a fluid, comprising:
- a support surface (11) comprising at least one groove (12) hollowed out in a thickness direction of the tank wall and extending in a longitudinal direction;
- a metal sealing membrane (50, 52) borne by the support surface (11) and extending in the longitudinal direction, the metal sealing membrane (50, 52) comprising at least one metal support (16) borne by the support surface (11), said metal support (16) comprising a first anchoring wing (17) and a second anchoring wing (18) sealingly secured to one another, the anchoring wings (17, 18) each comprising an upper portion (21) extending above the support surface (11) in a transverse direction so that the upper portion of the first anchoring wing (17) extends on one side of the groove (12) and the upper portion (21) of the second anchoring wing (18) extends on the other side of the groove (12), the anchoring wings (17, 18) each also comprising a base (19) retained in the groove of the support surface (11) in a direction perpendicular to the support surface (11) with a degree of freedom in the longitudinal direction, and the anchoring wings (17, 18) each comprising an arm (20) connecting the upper portion (21) to the base (19);
wherein the arms (20) of the anchoring wings (17, 18) are elastically deformable in flexion in the transverse direction so as to allow the upper portions (21) of the anchoring wings (17, 18) to move relative to one another in the transverse direction.

2. The sealed tank wall as claimed in claim 1, wherein the anchoring wings (17, 18) are welded to one another by a primary longitudinal weld (28) inside the groove (12).

3. The sealed tank wall as claimed in any one of the preceding claims, wherein the metal support (16) comprises a connecting part (30) which sealingly connects the bases (19) of the anchoring wings (17, 18) to one another inside the groove (12).

4. The sealed tank wall as claimed in any one of the preceding claims, wherein the metal sealing membrane (50, 52) comprises a plurality of said metal supports (16) arranged parallel to one another, wherein the upper portions (21) of the

anchoring wings (17, 18) of two adjacent metal supports (16) are directly or indirectly connected in a sealed manner.

5. The sealed tank wall as claimed in claim 4, wherein the metal sealing membrane (50, 52) comprises a metal strip (22) resting on the support surface (11), the metal strip (22) being arranged parallel to the metal supports (16), and wherein a first edge of the metal strip (22) is welded to the upper portion (21) of the first anchoring wing (17) of a first of the metal supports by a first secondary longitudinal weld (29), and a second edge of the metal strip (22) is welded to the upper portion (21) of the second anchoring wing (18) of a second of the metal supports by a second secondary longitudinal weld (29).

6. The sealed tank wall as claimed in claim 5, wherein one end of the metal strip is located between the support surface (11) and the upper portion (21) of an anchoring wing (17, 18) and wherein the secondary longitudinal weld (29) is made on the upper portion (21) so as to connect the metal strip (22) to the upper portion (21).

7. The sealed tank wall as claimed in claim 5, wherein the cross section of the metal strip (22) comprises a flat middle portion (23) resting on the support surface (11) and at least one offset portion (24) parallel to and at a distance from the support surface (11), the upper portion (21) of an anchoring wing (17, 18) being located between the support surface (11) and the offset portion (24) and wherein the secondary longitudinal weld (29) connecting a said upper portion (21) and an edge of the metal strip (22) is made on the offset portion (24) of the metal strip (22).

8. The sealed tank wall as claimed in one of claims 5 to 7, wherein the groove (12) is the main groove (12), and the support surface (11) comprises at least one secondary groove (15) hollowed out in the thickness direction and extending in the longitudinal direction in proximity to the main groove (12) and wherein the upper portion (21) of an anchoring wing is located in the secondary groove (15) and below a metal strip (22).

9. The sealed tank wall as claimed in any one of the preceding claims, wherein the groove (12) has an inlet zone (13) which extends in the thickness

direction, the groove (12) comprising a retaining zone (14) arranged below the inlet zone (13) and extending parallel to the support surface (11) over a width greater than the inlet zone (13), and wherein the base (19) of at least one anchoring wing of the metal support (16) is housed in the retaining zone (14).

10. The sealed tank wall as claimed in any one of the preceding claims, wherein the groove (12) comprises at least one fastener (26), the fastener (26) being configured to retain one of the bases (19) of the metal support (16) in the groove (12).

11. The sealed tank wall as claimed in the preceding claim, wherein at least one of the bases (19) of the metal support (16) has a rounded shape and the fastener (26) has a complementary rounded portion (27) so that the base (19) of the metal support (16) and the rounded portion (27) of the fastener (26) fit one inside the other.

12. The sealed tank wall as claimed in any one of the preceding claims, wherein the sealed tank wall comprises a thermally insulating barrier (51, 53) comprising a top panel including the support surface (6, 11).

13. The sealed tank wall as claimed in claim 12, wherein the thermally insulating barrier is a primary thermally insulating barrier (51) and the sealing membrane is a primary sealing membrane (50), and wherein the sealed tank wall comprises a secondary thermally insulating barrier (53) and a secondary sealing membrane (52) arranged under the primary thermally insulating barrier (51).

14. A polyhedral sealed tank (71) comprising a plurality of sealed tank walls secured to one another in a sealed manner to form a polyhedral interior space for the storage of a fluid, wherein one of said sealed tank walls is as claimed in any one of claims 1 to 13.

15. A carrier (70) for the transport of a liquid product, the carrier comprising a hull (72) and a sealed tank (71) as claimed in claim 14 arranged in the hull.

16. A transfer system for transferring a liquid product, the system comprising a carrier (70) as claimed in claim 15, insulated pipelines (73, 79, 76, 81) arranged so as to connect the sealed tank (71) installed in the hull of the carrier to a floating or onshore storage facility (77) and a pump for pumping a flow of liquid product

through the insulated pipelines from or to the floating or onshore storage facility, to or from the sealed tank of the carrier.