CLAIMS

1. A sealed and thermally insulating tank incorporated into a bearing structure, said bearing structure consisting of a double wall, which tank includes:

a thermal insulating barrier made integral with a bearing structure, a secondary sealing barrier located in the thermal insulating barrier, and a primary sealing barrier supported by the thermal insulating barrier, wherein the thermal insulating barrier consists of juxtaposed modules, each module being a rectangular parallelepiped and containing a first plywood panel on top of which is a first thermal insulation coat, on top of which is the secondary sealing barrier on which is arranged a second thermal insulating coat itself supporting a second plywood panel, supporting the primary sealing barrier consisting of ferrules or metal plates,

wherein the tank includes at least one damping device consisting of a damping material coat arranged between two walls, and includes a cord of mastic having an elasticity modulus of approximately 150MPa at a temperature of 25°C, interposed between the first panel and a wall of the bearing structure to attach the first panel to the wall of the bearing structure, wherein the cord of mastic arranged between the first panel and the wall of the bearing structure constitutes a first damping device.

2. A tank according to claim 1, wherein the cord of mastic further has an elasticity modulus of at most 500MPa at a temperature of -25°C.

3. A tank according to claim 1 further including a second damping device located under the primary sealing barrier, said second damping device consisting of the second panel, consisting of two walls between which is arranged a damping material coat.

4. A tank according to claim 1 further including a second damping device located under the primary sealing barrier.

5. A tank according to claim 1 further including a second damping device located between second sealing area and second thermal insulating coat.

6. A tank according to claim 1 further including a second damping device located between the first plywood panel, and the first thermal insulating coat.

7. A tank according any of claims 3 to 6, wherein a depression deflecting means is arranged between the first wall and the second wall of the second damping device and passes through the damping material coat, of the second damping device.

8. A tank according to claim 7, wherein the depression deflecting means has holes made respectively in the walls of the second damping device in a Tee shape with the free ends of the vertical bar of the Tee facing one another, and a H-shaped bar being arranged in the space thus formed, and inserted into said holes.

9. A tank according to claim 8, wherein the depression deflecting means has holes arranged respectively in the first wall and in the second thermal insulation coat, forming a Tee, while the free ends of the vertical bar of the Tee face one another and an H shaped bar is arranged in the space thus formed, and inserted into said holes.

10. A tank according to any of claims 3 to 9, wherein the junctions between the first walls of the second damping device are offset with respect to those of the second walls of the damping device.

11. A tank according to claim 10, wherein the junction between the first walls of the second damping device is identical to that found between the strips of an English parquet floor.

12. A tank according to one of claims 3 to 11, wherein the two walls of the second damping device have a thickness included between 9 and 21 mm.

13. A tank according to one of claims 3 to 12, wherein the two walls of the second damping device are of fir plywood or of a composite material.

CLAIMS

1. A sealed and thermally insulating tank incorporated into a bearing structure (1), said bearing structure consisting of a double wall, which tank includes:
a thermal insulating barrier made integral with a bearing structure (1),
a secondary sealing barrier (5) located in the thermal insulating barrier, and
a primary sealing barrier (10) supported by the thermal insulating barrier,
wherein the thermal insulating barrier consists of juxtaposed modules, each module being a rectangular parallelepiped and containing a first plywood panel (3) on top of which is a first thermal insulation coat (4), on top of which is the secondary sealing barrier (5) on which is arranged a second thermal insulating coat (6) itself supporting a second plywood panel (7), supporting the primary sealing barrier (10) consisting of ferrules or metal plates,
characterized in that the tank includes at least one damping device consisting of a damping material coat arranged between two walls, and includes a cord of mastic (14) having an elasticity modulus of at most 500MPa at a temperature of -25°C and approximately 150MPa at a temperature of 25°C, interposed between the first panel (3) and a wall of the bearing structure (1) to attach the first panel (3) to the wall of the bearing structure, wherein the cord of mastic (14) arranged between the first panel (3) and the wall of the bearing structure (1) constitutes a first damping device.

2. A tank according to claim 1 characterized in that it also includes a second damping device located under the primary sealing barrier (10), said second damping device consisting of the second panel (7), consisting of two walls (8, 9) between which is arranged a damping material coat (11).

3. A tank according to claim 1 characterized in that it also includes a second damping device located under the secondary sealing barrier (5).

4. A tank according to claim 1 characterized in that it also includes a second damping device located between the secondary sealing barrier (5) and second thermal insulating coat (6).

5. A tank according to claim 1 characterized in that it also includes a second damping device located between the first panel (3), and the first thermal insulating coat (4).

6. A tank according any of claims 2 to 5, characterized by the fact that a depression deflecting means is arranged between the first wall (8, 8') and the second wall (9, 9') of the second damping device and passes through the damping material coat (11, 11) of the second damping device.

7. A tank according to claim 6, characterized by the fact that the depression deflecting means has holes (12a, 12b) made respectively in the walls of the second damping device (8, 8'; 9, 9') in a Tee shape with the free ends of the vertical bar of the Tee facing one another, and a H-shaped bar (13) being arranged in the space thus formed, and inserted into said holes.

8. A tank according to claim 7, characterized by the fact that the depression deflecting means has holes (12a, 12b) arranged respectively in the first wall (8, 8') and in the second thermal insulation coat (6), forming a Tee, while the free ends of the vertical bar of the Tee face one another and an H shaped bar (13) is arranged in the space thus formed, and inserted into said holes.

9. A tank according to any of claims 2 to 8, characterized by the fact that the junctions between the first walls (8, 8') of the second damping device are offset with respect to those of the second walls (9, 9') of the damping device.

10. A tank according to claim 9, characterized in that the junction between the first walls (8, 8') of the second damping device is identical to that found between the strips of an English parquet floor.

11. A tank according to one of claims 2 to 10, characterized by the fact that the two walls (8, 8'; 9, 9') of the second damping device have a thickness included between 9 and 21 mm.

12. A tank according to one of claims 2 to 11, characterized by the fact that the two walls (8, 8'; and 9, 9') of the second damping device are of fir plywood or of a composite material.