

SEALED AND THERMALLY INSULATING TANK

Abstract

The present invention relates primarily to a sealed and thermally insulating tank (1) having at least one structure (2) for storing a fluid and a load-bearing structure (4) encasing the storage structure (2), the storage structure (2) comprising a plurality of walls, namely at least a ceiling wall (6), a bottom wall (8) and a plurality of side walls (10a, 10b) extending between the ceiling wall (6) and the bottom wall (8), at least the ceiling wall (6) comprising a first portion (46) and a second portion (48), the first portion (46) having, in succession in the direction of the thickness from the outside to the inside of the tank (1), a sealed and thermally insulating secondary space (28) and a sealed and thermally insulating primary space (30), the secondary space (28) being configured to be in contact with the load-bearing structure (4), the primary space (30) delimiting an internal volume (44) configured to receive the fluid contained in the tank (1), the second portion (48) comprising a sealed and thermally insulating layer (50), characterized in that the sealed and thermally insulating layer (50) of the second portion (48) is in contact with the load-bearing structure (4) while being involved in delimiting the internal volume (44) of the tank (1), a ratio of the surface area of the second portion (48) of the ceiling wall (6) to the total surface area of the ceiling wall (6) being between 5% and 60%.

Fig. 1