

Title (en)
DOUBLE-WALLED CONTAINER FOR VERY COLD LIQUIDS

Publication
EP 0066276 A3 19830518 (DE)

Application
EP 82104687 A 19820528

Priority
• DE 3121945 A 19810603
• DE 3211654 A 19820330

Abstract (en)
[origin: EP0066276A2] 1. Double-walled container (1) for very cold liquids, principally liquefied gas, comprising an inner tank (2) as the primary storage container and an outer tank (3) of prestressed concrete as the secondary safety container, a thermally insulating layer arranged between the two containers, and a joining structure (8 or 26) between the wall (6) and the bed slab (7) of the safety container in which the joint region is bridged uninterruptedly by a steel joint plate (9 or 38) the ends of which are fixed in position, characterised - in that in the region of the joint, the outer tank (3) has a joining structure (8) arranged on the inside of the container which transmits forces acting perpendicularly to the plane of the joint (5), and in this joining structure the joint plate (9) which bridges the joint is anchored in the concrete of the container (3) by embedded structures (10, 11) comprising steel members (12) - e.g. Z sections - folded to form a plurality of angles, in the wall (6) at the upper edge and in the bed slab (7) at the lower edge, - in that said embedded structures (10, 11) are shaped into a plurality of angles and are of a size and deformability such that they are only stressed in the elastic range under planned loads but are plastically deformable under the circumstances of catastrophic thermal shock, in which case the couple applied in the direction of displacement to the flanges of the angularly folded steel members (12) generates bending stresses in the webs (19) of the sections of a magnitude such that plastic hinges are formed in the corners (20) of the sections, the sections stretch in accordance with the deformation of the joint plate (9), and transmit to the concrete of the wall (6) or the bed slab (7) only such anchoring forces as said concrete is able to withstand without damage, and - in that an upstand (18) which encloses the foot of the wall (6) on the outside is arranged on the bed slab (7), said upstand permitting inward movement but restricting outward movement.

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F17C 3/02; **F17C 13/12**

IPC 8 full level
F17C 3/02 (2006.01); **F17C 13/00** (2006.01)

CPC (source: EP)
F17C 3/022 (2013.01); **F17C 13/004** (2013.01); **F17C 2203/0678** (2013.01)

Citation (search report)
• [A] DE 2545527 A1 19770303 - NEDERHORST BOUWMIJ
• [AD] FR 1383795 A 19650104 - GAZ DE FRANCE
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• [AP] FR 2475605 A1 19810814 - DYCKERHOFF & WIDMANN AG [DE]
• [A] DE 2016441 A1 19701217

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