

ABSTRACT

A compressed gas storage tank 10 utilizes a rock-bed cavity 11 in which a bentonite slurry is fed into an underground cavity 11 formed in a rock-bed, a forcibly fed compressed gas is stored in said rock-bed cavity in a state in which the compressed gas is loaded with a pressure load of the bentonite slurry from the underside of the compressed gas, the bentonite slurry in the rock-bed cavity 11 is of a dual layer structure consisting of an upper layer composed of a light bentonite slurry 30 mixed with a filling-up material invading into and filling up a void and a crack formed in an inner wall surface and a lower layer composed of a heavy bentonite slurry 13 mixed with a high specific gravity fine powder as a load condition material. The filling-up effect of the bentonite slurry secures sufficient liquid-tightness and air-tightness in the ceiling part of the rock-bed cavity, making it possible to efficiently and economically store compressed gasses such as compressed air or natural gas without allowing them to escape.



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