

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1 US 2013/118170 A1 (MIERISCH ROBERT CHARLES [US] ET AL) 16 May 2013 (2013-05-16)

Lack of novelty

- 1 The present application does not meet the criteria of patentability, because the phase change energy storage system of claim 1 is not new.

Document D1 discloses

- A phase change energy storage system composed of one or more sealed high pressure tanks (105) containing virtually anhydrous liquid ammonia in equilibrium with high pressure ammonia vapor (paragraphs [0009], [0013], [0020], [0023]-[0027], figures 2(a), 2(b)),
- a sealed low pressure tank (110) containing a liquid solution of water and ammonia in equilibrium with low pressure ammonia vapor (paragraphs [0009], [0013], [0023]-[0027], [0044], figures 2(a), 2(b)),
- a reversible compressor/motor (120(a), 120(b)) capable of transferring the ammonia vapor from one tank to the other (paragraph [0009]).

- 2 Dependent claim(s) 2-3 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of novelty and/or inventive step for the following reasons:

Claim 2: See paragraphs [0057] and [0069] of D1 disclosing the possibility of the implementation of a plurality of high pressure tanks. It is implicitly disclosed that the tanks are equipped with valves through which the liquid/vapor ammonia mixture circulate between the tanks.

Claim 3: D1 further discloses a reciprocating piston as a reversible compressor/motor, see paragraphs [0007], [0058]-[0064]. The feature of the below seals is merely a straightforward design option for the skilled person.

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Certain defects in the application

- 3 The relevant background art disclosed in D1 is not mentioned in the description, nor is this document identified therein.