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(54) Title: MAGNESIUM CARBONATE PRODUCTS

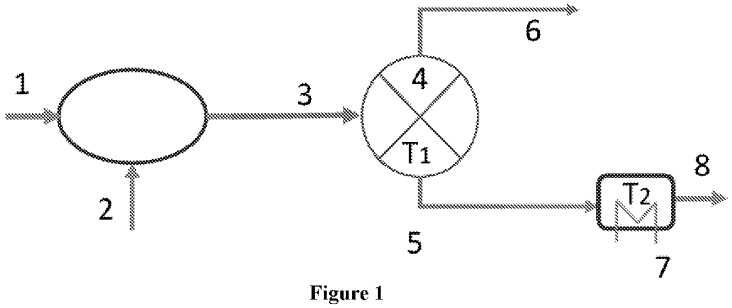


Figure 1

(57) Abstract: The present invention relates to a process for carbon dioxide (CO_2) capture, sequestration and utilisation through the production of magnesium carbonate products, the process comprising: a) contacting an aqueous slurry of magnesium silicate with CO_2 to produce an aqueous slurry comprising hydrated magnesium (hydroxy) carbonate; b) subjecting the aqueous slurry comprising hydrated magnesium (hydroxy) carbonate to a separation process at a first temperature to produce a concentrate having an increased concentration of the hydrated magnesium (hydroxy) carbonate relative to that of the aqueous slurry comprising hydrated magnesium (hydroxy) carbonate produced in step (a); and c) subjecting the concentrate to a second temperature above the first temperature to produce a magnesium carbonate product having (i) a reduced molar ratio of hydroxyl group (OH) or water of crystallisation to magnesium, and (ii) a different crystal structure to the hydrated magnesium (hydroxy) carbonate in the concentrate.

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