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(54) **HEAT EXCHANGE SYSTEM FOR FREEZING A PHASE CHANGE MATERIAL AND METHODS THEREOF**

WÄRMEAUSTAUSCHSYSTEM ZUM EINFRIEREN EINES SPEICHERSTOFFS UND VERFAHREN DAFÜR

SYSTÈME D'ÉCHANGE DE CHALEUR DESTINÉ À CONGELER UN MATÉRIAU À CHANGEMENT DE PHASE, ET PROCÉDÉS ASSOCIÉS

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(56) References cited:
WO-A1-2010/078701 WO-A1-2010/093400
WO-A1-2016/035105 CN-Y- 200 968 799
JP-B2- 5 872 037 US-A- 2 996 894
US-A1- 2015 204 612 US-A1- 2016 123 680
US-A1- 2016 174 418

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