

Title (en)  
SYSTEM AND METHOD FOR RECOVERING WASTE HEAT ENERGY

Title (de)  
SYSTEM UND VERFAHREN ZUR RÜCKGEWINNUNG VON ABWÄRMEENERGIE

Title (fr)  
SYSTÈME ET PROCÉDÉ POUR RÉCUPÉRER DE L'ÉNERGIE THERMIQUE PERDUE

Publication  
**EP 3167166 A1 20170517 (EN)**

Application  
**EP 14846776 A 20140908**

Priority  
RU 2014000666 W 20140908

Abstract (en)  
[origin: WO2016039655A1] The present invention provides a system (1) for recovering or utilizing waste heat energy from a waste heat source (S). The system (1) comprises: a first heat engine (H1) having a first working fluid (F1), especially carbon-dioxide (CO<sub>2</sub>), and defining a first circuit (A) for circulation of the first working fluid (F1). The first heat engine (H1) is configured and arranged for transferring heat from the waste heat source (S) to the first working fluid (F1). The system (1) further includes a second heat engine (H2), especially an organic Rankine cycle (ORC) heat engine, having a second working fluid (F2) and defining a second circuit (B) for circulation of the second working fluid (F1). The second heat engine (H2) is configured and arranged for transfer of heat from the first working fluid (F1) to the second working fluid (F2), especially for cooling the first working fluid (F1) after an expansion thereof in a turbine (T1) of the first heat engine. The invention also provides a corresponding method of waste heat recovery.

IPC 8 full level  
**F01K 23/04** (2006.01); **F01K 25/10** (2006.01); **F22B 35/08** (2006.01)

CPC (source: EP RU)  
**F01K 23/04** (2013.01 - EP RU); **F01K 25/103** (2013.01 - EP); **F01K 25/106** (2013.01 - EP); **F22B 35/086** (2013.01 - EP)

Cited by  
EP3587752A4

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2016039655 A1 20160317**; EP 3167166 A1 20170517; EP 3167166 B1 20201104; ES 2848307 T3 20210806; RU 2017111353 A 20181010; RU 2017111353 A3 20181010; RU 2673959 C2 20181203

DOCDB simple family (application)  
**RU 2014000666 W 20140908**; EP 14846776 A 20140908; ES 14846776 T 20140908; RU 2017111353 A 20140908