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- (71) **Applicant (for all designated States except US):** UNIVERSITY OF MASSACHUSETTS [US/US]; 255 Franklin Street, 12th Floor, Boston, MA 02110 (US).
- (72) **Inventor; and**
- (75) **Inventor/Applicant (for US only):** MACDONALD, Daniel, G. [US/US]; 28 Jones Road, Mashpee, MA 02649 (US).
- (74) **Agent:** AMUNDSEN, Eric, L.; Wolf, Greenfield & Sacks, P.C., Federal Reserve Plaza, 600 Atlantic Avenue, Boston, MA 02210-2206 (US).
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(54) **Title:** ENHANCED SURFACE COOLING OF THERMAL DISCHARGES

(57) **Abstract:** A water discharge system enhances heat transfer to the atmosphere by limiting the mixing of heated discharge water with the ambient water of a receiving water body. The heated water is maintained near the top surface of the receiving water body which increases the transfer of heat to the atmosphere as compared to a system where the discharge water is mixed quickly with the ambient water.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US07/25547

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC: **F25D 3/08**( 2006.01);**F02C 1/06**( 2006.01),**3/10**( 2006.01),**6/00**( 2006.01);**F02G 1/00**( 2006.01),**3/00**( 2006.01)

USPC: 62/1;60/39.181,39.182,39.183,641.2;290/54

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 62/1; 165/129; 60/916,204,39.181, 39.182, 39.183,694, 641.2; 290/54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST data base, Google Patents, waste heat, power generation, electricity generation, power plant, geothermal power

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Shields, J. Rodger (US 4,291,540) 29 September 1981 (29.09.1981) Fig. 1 and Fig. 2	1-14, 18
Y	Miller, Robert L. (US 2005/0230325) 20 October 2005 (20.10.2005) Fig. 1A and para 34, 40	15-17
A	Levoy, Larry (US 4,047,093) 6 September 1977 (06.09.1977) All	1-56
A	Gericke, et al. (US 2005/0235625) 27 October 2005 (27.10.2005) All	1-56

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"
"A" document defining the general state of the art which is not considered to be of particular relevance	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
Facsimile No. (571) 273-3201

Authorized officer  
Cheryl J Tyler  
Telephone No. 571-272-4834