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Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))
- as to non-prejudicial disclosures or exceptions to lack of novelty (Rule 4.17(v))

Published:

- with international search report (Art. 21(3))

(88) Date of publication of the international search report:
20 October 2011



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(54) Title: ENERGY CONVERTERS

(57) Abstract: Energy wheel' working with the wind, transfers the wind energy to pressure energy and collects air at the desired pressure or store water at the desired height.

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2010/000065

A. CLASSIFICATION OF SUBJECT MATTER
INV. F03B13/18 F03B17/00 F03D9/02
ADD.
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)
F03B F03D

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 practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 42 01 683 A1 (FRICKE RUDI [DE]) 29 July 1993 (1993-07-29)	1,7
Y	page 2, line 60 - page 3, line 30; figure 1	2
Y	----- US 2005/180863 A1 (LIN DAH-SHAN [TW]) 18 August 2005 (2005-08-18)	2
A	the whole document	1,3-9
X	----- US 4 756 666 A (LABRADOR GAUDENCIO A [US]) 12 July 1988 (1988-07-12)	3
	column 6, line 34 - column 7, line 20; figure 6	
X	----- DE 28 30 587 A1 (SCHATTA MARTIN) 31 January 1980 (1980-01-31)	3
	page 12, line 7 - page 13, line 18; figures 1,2	
	----- -/--	

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "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)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" 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
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "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.
- "&" document member of the same patent family

Date of the actual completion of the international search 6 July 2011	Date of mailing of the international search report 14/07/2011
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Beran, Jiri

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2010/000065

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 2 705 627 Y (XIANG ZHIGUANG [CN]) 22 June 2005 (2005-06-22) figure 1 -----	4
X	ES 2 234 391 A1 (OBLANCA MARTINEZ ANTONIO [ES]) 16 June 2005 (2005-06-16) page 2, line 67 - page 3, line 38; figure 1 -----	5
X	DE 44 40 761 A1 (MEIER KARL [DE]) 23 May 1996 (1996-05-23) the whole document -----	5
X	GB 302 050 A (ROBERT DELANOY COOKE SHAW) 13 December 1928 (1928-12-13) page 2, line 57 - page 3, line 80; figure 1 -----	5
X	EP 0 265 594 A1 (WINDLE TOM J) 4 May 1988 (1988-05-04) page 5, line 21 - page 7, line 28; figures 1-3 -----	6
X	US 2007/080540 A1 (TUNG JUI-CHI [TW]) 12 April 2007 (2007-04-12) paragraphs [0017] - [0026]; figures 1-6 -----	8
X	WO 2007/073358 A1 (BEKISOGLU SAHIN [TR]) 28 June 2007 (2007-06-28) pages 2-8; figures 5-8 -----	9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/TR2010/000065

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 2(completely); 7(partially)

a wind driven device having an endless chain of buckets immersed in water carrying air into depth and releasing the carried air into an air storage after a lower turn of the endless chain

2. claim: 3

a floating wind driven reciprocating device having buoys with sails whereby sails turn alternatively parallel and perpendicular to the wind

3. claims: 4, 8(completely); 7(partially)

a buoyant force driven device having a pair of submerged vessel alternatively filled with air to ascend and water to descent in a water reservoir

4. claims: 5(completely); 7(partially)

a device having a balanced hollow arm with water filling the arm causing imbalance to swing the arm and return the arm back after water is released from the arm

5. claims: 6(completely); 7(partially)

a wave riding buoy having a cable anchored to the sea-bed with a piston and spring to convert the wave motion into pressurised air

6. claims: 9(completely); 7(partially)

an overshot water wheel using an energy potential of a water head employing piston to convert the energy

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/TR2010/000065

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4201683	A1	29-07-1993	NONE
US 2005180863	A1	18-08-2005	JP 2005226652 A 25-08-2005
US 4756666	A	12-07-1988	NONE
DE 2830587	A1	31-01-1980	NONE
CN 2705627	Y	22-06-2005	NONE
ES 2234391	A1	16-06-2005	NONE
DE 4440761	A1	23-05-1996	NONE
GB 302050	A	13-12-1928	NONE
EP 0265594	A1	04-05-1988	AU 594783 B2 15-03-1990 AU 7430087 A 14-04-1988 CA 1270421 A1 19-06-1990 CN 87104861 A 20-04-1988 DE 3777945 D1 07-05-1992 ES 2030404 T3 01-11-1992 GR 3004552 T3 28-04-1993 JP 63097877 A 28-04-1988 MX 168846 B 11-06-1993 NZ 220713 A 26-04-1989 PH 24701 A 01-10-1990 PT 85215 A 30-11-1988
US 2007080540	A1	12-04-2007	NONE
WO 2007073358	A1	28-06-2007	TR 200505074 A2 21-07-2006