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[Continued on next page]

(54) Title: NACELLE CONFIGURATIONS FOR A SHROUDED WIND TURBINE

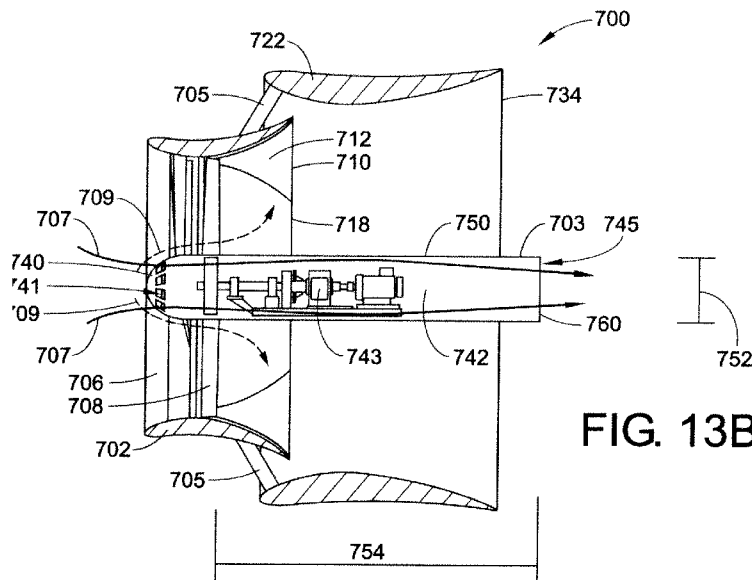
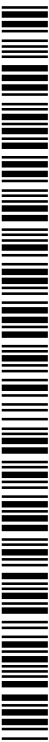


FIG. 13B

(57) Abstract: A shrouded wind turbine comprises a shroud disposed about an impeller. The impeller surrounds a nacelle body which is shaped to enhance smooth flow of wind through the impeller. Some embodiments include an inlet and an outlet in the nacelle body, allowing airflow through an interior cavity. Other nacelle bodies may be tapered, flared, include mixing lobes around a trailing edge, or may have other shapes that enhance fluid flow. Some nacelle bodies include an annular groove that promotes flow attachment. Maintaining airflow attachment to the nacelle body within the turbine increases the energy generation capacity of the wind turbine.



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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No PCT/US2010/037383
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A. CLASSIFICATION OF SUBJECT MATTER INV. F03D1/04 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) 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.		
A	US 4 720 640 A (ANDERSON BJORN M S [US] ET AL) 19 January 1988 (1988-01-19) column 6, line 32 - column 7, line 36; figures 1,2 -----	1-20		
X	JP 2003 328921 A (YAMAGUCHI KO) 19 November 2003 (2003-11-19) * abstract; claim 2; figure 1 -----	1,8,9		
X	CN 100 487 239 C (NANJING AERONAUTIC AND ASTRONA [CN] UNIV NANJING AERONAUTICS [CN]) 13 May 2009 (2009-05-13) figures 1,2 -----	1,5,8,9		
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> "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 </td> <td style="width: 50%; border: none; vertical-align: top;"> "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 </td> </tr> </table>			"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
"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	Date of mailing of the international search report			
25 March 2011	04/04/2011			
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/US2010/037383

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008/232957 A1 (PRESZ WALTER M [US] ET AL PRESZ WALTER JR [US] ET AL) 25 September 2008 (2008-09-25) paragraphs [0015], [0016], [0017], [0056], [0068] - [0070]; figures 6,7,22,23 -----	1,5,8,9, 16,20
X	EP 1 067 286 A1 (ORLOV IGOR SERGEEVICH [RU]; SOBOL EMMANUIL AVRAAMOVICH [RU]; EGOROV MI) 10 January 2001 (2001-01-10) column 2, lines 20-27; figures 1,2 paragraph [0026] -----	16,20
X	WO 97/41351 A1 (MEZHDUNARODNY FOND KONVERSII [RU]; ORLOV IGOR SERGEEVICH [RU]; SOBOL E) 6 November 1997 (1997-11-06) page 5, line 27 - page 6, line 27; figure 1 -----	16,20

INTERNATIONAL SEARCH REPORT

International application No.
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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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2010/037383

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
US 4720640	A	19-01-1988	NONE	

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-15

A shrouded wind turbine having an air duct through a nacelle from a leading surface to a trailing nacelle of said nacelle

2. claims: 16-20

a shrouded wind turbine having a nacelle with an annular gap on a nacelle exterior
