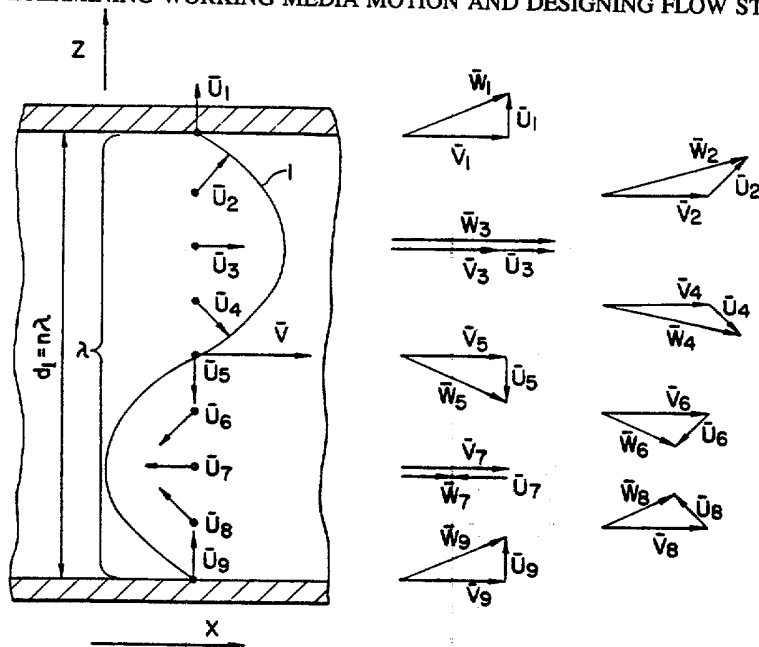




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : G06G 7/57, G02B 6/10</p>	<p>A3</p>	<p>(11) International Publication Number: WO 95/12160 (43) International Publication Date: 4 May 1995 (04.05.95)</p>
<p>(21) International Application Number: PCT/US94/12479 (22) International Filing Date: 28 October 1994 (28.10.94) (30) Priority Data: 08/144,776 28 October 1993 (28.10.93) US (60) Parent Application or Grant (63) Related by Continuation US 08/144,776 (CIP) Filed on 28 October 1993 (28.10.93) (71)(72) Applicant and Inventor: MAISOSENKO, Valeriy, S. [UA/US]; 5628 South Idalia Street, Aurora, CO 80015 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): ARSIRI, Vassili, A. [UA/UA]; 29/2 Apartment 22, Kosmonavtov Street, Odessa, 270070 (UA). (74) Agents: TOMPKINS, Michael, L. et al.; Sheridan Ross & McIntosh, Suite 3500, 1700 Lincoln Street, Denver, CO 80203 (US).</p>	<p>(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 26 May 1995 (26.05.95)</p>	

(54) Title: METHOD OF DETERMINING WORKING MEDIA MOTION AND DESIGNING FLOW STRUCTURES FOR SAME



(57) Abstract

The characteristic diameter of a restricted space through which a working media is to be motioned is determined based on the wavelength of the working media prior to the introduction of the working media into the restricted space. The particular formula used to calculate the characteristic diameter is based on a specific goal. Equation 1 is used when the goal is to achieve the maximum possible decrease of the resistance, while equation 2 is used with the objective of maximum possible increase of the resistance, while equation 3 is used when the aim is at maximum possible decrease of the flow turbulence level. (1) $d_1 = n \times \lambda + 1/4 \lambda$, (2) $d_1 = n \times \lambda + 3/4 \lambda$, (3) $d_1 = n \times \lambda$, where d_1 is the characteristic diameter of the restricted space, $n = d/\lambda$ is a whole number with the fractional remainder neglected, d is the required characteristic diameter of the restricted space calculated by the required working media flow rate, and λ is the motioned working media wavelength.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US94/12479

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(6) :G06G 7/57; G02B 6/10 US CL :364/510, 512; 137/1, 13; 385/123 According to International Patent Classification (IPC) or to both national classification and IPC</p>														
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) U.S. : 364/510, 512, 578; 137/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14; 385/123</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS</p>														
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X --- Y</td> <td>US, A, 4,665,660 (Jablonski et al.) 19 May 1987, col. 4 line 22 to col. 5 line 10.</td> <td>1 and 25-30 ----- 2-24</td> </tr> <tr> <td>X --- Y</td> <td>US, A, 5,074,324 (Ng) 24 December 1991, col. 3 lines 23-27, col. 4 lines 41-57, and the abstract.</td> <td>1 and 25-30 ----- 2-24</td> </tr> <tr> <td>A</td> <td>US, A, 4,607,912 (Burns et al.) 26 August 1986, the entire document particularly col. 2 line 55 to col. 3 line 20.</td> <td>1-30</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X --- Y	US, A, 4,665,660 (Jablonski et al.) 19 May 1987, col. 4 line 22 to col. 5 line 10.	1 and 25-30 ----- 2-24	X --- Y	US, A, 5,074,324 (Ng) 24 December 1991, col. 3 lines 23-27, col. 4 lines 41-57, and the abstract.	1 and 25-30 ----- 2-24	A	US, A, 4,607,912 (Burns et al.) 26 August 1986, the entire document particularly col. 2 line 55 to col. 3 line 20.	1-30
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<p>Date of the actual completion of the international search 18 JANUARY 1995</p>		<p>Date of mailing of the international search report 18 APR 1995</p>												
<p>Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230</p>		<p>Authorized officer <i>B. Handley</i> Emanuel T. Voeltz Telephone No. (703) 305-3800</p>												

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US94/12479

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, A, 5,175,785 (Dabby) 29 December 1992, the entire document particularly equation 1 and the accompanying description in the background.	1-30
A	US, A, 5,182,783 (Bosc et al.) 26 January 1993, the entire document particularly col. 5 lines 16-32.	1-30
A,P	US, A, 5,313,544 (Lentink) 17 May 1994, the entire document.	1-30