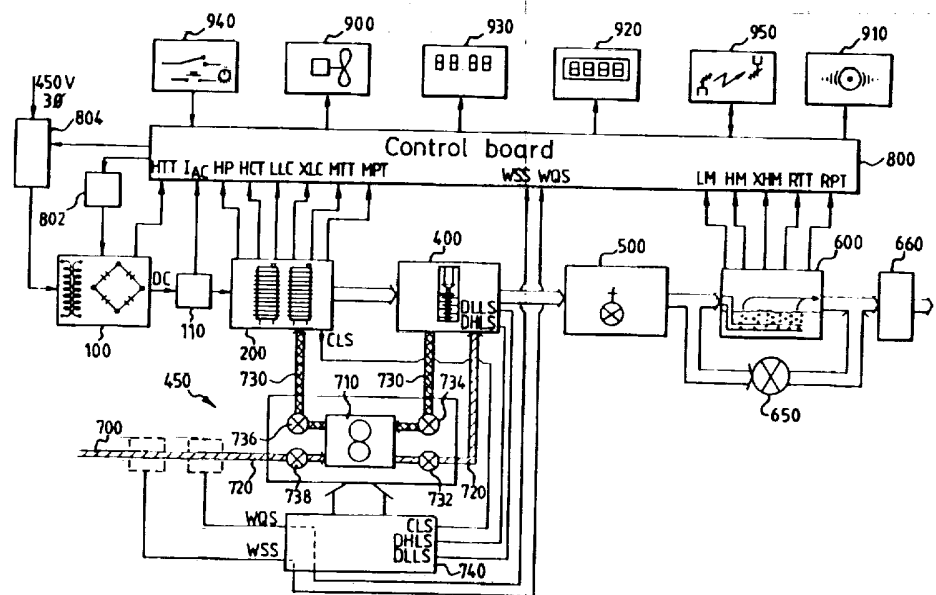




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁵ : C25B 9/00, 15/00</p>	<p>A3</p>	<p>(11) International Publication Number: WO 91/07525 (43) International Publication Date: 30 May 1991 (30.05.91)</p>
<p>(21) International Application Number: PCT/GB90/00008 (22) International Filing Date: 3 January 1990 (03.01.90) (30) Priority data: 8926096.2 17 November 1989 (17.11.89) GB (71) Applicant: COMMAND INTERNATIONAL INC. [GB/GB]; 802 Tower 1, Admiralty Centre, Harcourt Road (HK). (72) Inventors: WILLEY, Alan, Peter ; 11 Jerusalem Street, Merville Park, Paranaque, Metro Manila (PH). RADFORD, Neal, Thomas ; P-51 Vallee Verde Mansions, Oranbo Avenue, Pasig, Metro Manila (PH).</p>		<p>(74) Agent: STURT, Clifford, Mark; Marks & Clerk, 57-60 Lincoln's Inn Fields, London WC2A 3LS (GB). (81) Designated States: AT (European patent), AU, BE (European patent), BG, BR, CA, CH (European patent), DE (European patent)*, DK (European patent), ES (European patent), FI, FR (European patent), GB (European patent), HU, IT (European patent), JP, KP, KR, LK, LU (European patent), MC, NL (European patent), NO, RO, SE (European patent), SU. 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: 17 October 1991 (17.10.91)</p>

(54) Title: APPARATUS FOR GAS GENERATION



(57) Abstract

An electrolytic gas generating apparatus for producing a combustible mixture of hydrogen and oxygen by electrolysis of water is disclosed, for particular use in a gas welding apparatus. The generating apparatus comprises a d.c. power supply (100) connected to electrolytic cells (200), a dehumidifier (400) for scrubbing the gas mixture generated by the cells (200), a gas regulator (500), a modifier (600) which modifies the combustion characteristics of the gas and a flash arrester (660). Gas generation is controlled by a main control board (800) in accordance with sensors which measure parameters to calculate indirectly the gas flowrate and control this in accordance with demand.

* See back of page

DESIGNATIONS OF "DE"

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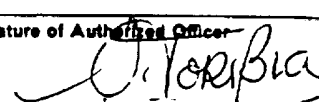
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 90/00008

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC ⁵ : C 25 B 9/00, C 25 B 15/00		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
IPC ⁵	C 25 B 9/	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹		
Category ⁹	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	FR, A, 2541314 (GAIG RENTER J.) 24 August 1984 see page 3, lines 19-36 --	1
A	FR, A, 2246655 (GÖTZ F.) 2 May 1975 see pages 8,9; claims; figures 1-4 --	1
A	FR, A, 2373615 (E. SPIRIG) 7 July 1978 --	
A	DE, A, 2346839 (E. SPIRIG) 6 March 1975 -----	
<p>¹⁰ Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"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</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"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.</p> <p>"Z" document member of the same patent family</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
21st March 1991	29. 08. 91	
International Searching Authority	Signature of Authorized Officer	
EUROPEAN PATENT OFFICE	 Nuria TORIBIO	

FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

V. OBSERVATIONS WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE¹

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

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

2. Claim numbers 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. Claim numbers because they are dependent claims and are not drafted in accordance with the second and third sentences of PCT Rule 6.4(a).

VI. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING²

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

1. Claims 1-16, 38-42, 48
- 2.- Claims 17-19, 20-25, 34-37, 43-47
- 3.- Claims 26-29
- 4.- Claims 30-33

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims of the international application.
2. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims of the international application for which fees were paid, specifically claims:
3. 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 claim numbers: 1-16, 38-42, 48
4. As all searchable claims could be searched without effort justifying an additional fee, the International Searching Authority did not invite payment of any additional fee.

Remark on Protest

- The additional search fees were accompanied by applicant's protest.
- No protest accompanied the payment of additional search fees.

ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.

GB 9000008

SA 33140

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 06/08/91. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A- 2541314	24-08-84	None	
FR-A- 2246655	02-05-75	DE-A- 2349286 CH-A- 594062 US-A- 3990962	10-04-75 30-12-77 09-11-76
FR-A- 2373615	07-07-78	GB-A- 1519679 AU-B- 506887 AU-A- 3082677 CA-A- 1092546 CH-A- 624149 DE-A, B, C 2754668 JP-C- 1337174 JP-A- 53104576 JP-B- 60059305 SE-B- 420846 SE-A- 7713931 US-A- 4113601	02-08-78 24-01-80 31-05-79 30-12-80 15-07-81 29-06-78 11-09-86 11-09-78 24-12-85 02-11-81 10-06-78 12-09-78
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