

Number of
Company

488238/1

[Form No. 41

THE COMPANIES ACT, 1948

RECEIVED

11 NOV 1950

Declaration of Compliance



A
Companies
Registration
Fee Stamp
of 5s.
must be
impressed
here.

WITH THE

REQUIREMENTS OF THE COMPANIES
ACT, 1948,

made pursuant to Section 15, Sub-Section (2), of The Companies Act, 1948,
on behalf of a Company proposed to be registered as

VACUUM RESEARCH (CAMBRIDGE)

LIMITED

HO-53340

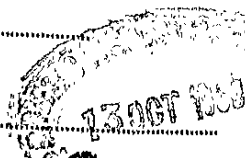
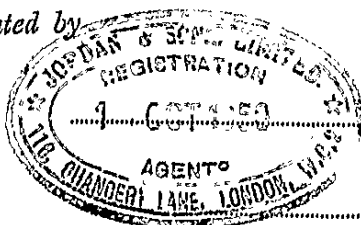
Telegrams: "CERTIFICATE, ESTRAND, LONDON."

Telephone No.: HOLBORN 0434 (6 lines).

JORDAN & SONS, LIMITED

Company Registration Agents, Printers, and Publishers
116 Chancery Lane, London, W.C.2, and 13 Broad Street Place, E.C.2

Presented by



I JOHN HENRY BARTRAM

of 8 Market Hill in the Borough and County of Cambridge

*Here insert-
"a Solicitor
of the Su-
preme Court
(or in Scotland
"a Solicitor")
engaged in
the formation
of" or "a
person named
in the Articles
of Association
as a
Director (or
Secretary)
of."

do solemnly and sincerely declare that I am* a Solicitor of the
Supreme Court engaged in the formation of Vacuum Research
(Cambridge)

LIMITED,

and that all the requirements of The Companies Act, 1948, in respect of
matters precedent to the registration of the said Company and incidental
thereto have been complied with; And I make this solemn Declaration
conscientiously believing the same to be true, and by virtue of the provisions
of The Statutory Declarations Act, 1835.

Declared at Cambridge

the 10th day of October

One thousand nine hundred and fifty

before me,

H. A. Wilkerson

A Commissioner for Oaths. †

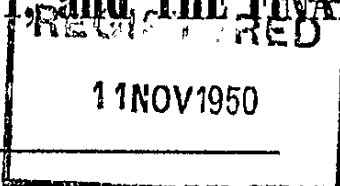
† or Notary Public or Justice of the Peace.

NOTE.—This margin is reserved for binding, and must not be written across.

Number of } 488233/✓
Certificate }

[Form No. 25

THE STAMP ACT, 1891, and THE FINANCE ACT, 1933



COMPANY LIMITED BY SHARES



Duty at the rate of 10s. for every £100 must be impressed here.

Statement of the Nominal Capital

OF

VACUUM RESEARCH (CAMBRIDGE)

LIMITED

Pursuant to Section 112 of The Stamp Act, 1891; as amended by
Section 41 of The Finance Act, 1933

The Statement is to be lodged with the Memorandum of Association and other Documents when the Registration of the Company is applied for

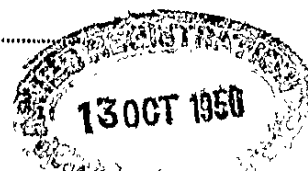
11G-138002G

Telegrams "CERTIFICATE, ESTRAND, LONDON."

Telephone No.: HOLBORN 0434.

JORDAN & SONS, LIMITED,
Company Registration Agents, Printers, and Publishers,
116 Chancery Lane, London, W.C.2, and 13 Broad Street Place, E.C.2

Presented by



THE NOMINAL CAPITAL

OF

VACUUM RESEARCH (CAMBRIDGE) LIMITED,

is One thousand Pounds,

divided into One thousand Ordinary Shares

of One pound each.

Signature P. Alexander

Description Director

Dated the 10th October day

of October 19 50

NOTE.—This margin is reserved for binding, and must not be written across.

*** This Statement should be signed by an Officer of the Company*



488238/3
The Companies Act, 1948

REGISTERED

COMPANY LIMITED BY SHARES

11 NOV 1950

Memorandum of Association
OF



Vacuum Research (Cambridge)
LIMITED.

1. The Name of the Company is "VACUUM RESEARCH (CAMBRIDGE) LIMITED."

2. The Registered Office of the Company will be situated in England.

3. The Objects for which the Company is established are—

- (A) To undertake and carry out scientific, chemical and industrial researches and investigations, and experimental work of every description, and to carry on all or any of the businesses of Analysts, Consultants, Assayers, Samplers, and Consulting and Contracting Chemical Engineers, Physicists, Vacuum Research, General Research, Analytical, and Consulting Chemists, Manufacturers, Merchants, and Factors of and Dealers in all classes of Chemicals and Chemical Products, Intermediates, Compositions, Preparations and Derivatives of all kinds, and Chemical, Industrial, Pharmaceutical, Medicinal, and other Preparations and Articles of every description, and the Products and By-Products thereof; to employ properly qualified persons to act on the Company's behalf as Consultants, Research and Analytical Chemists, or otherwise in any manner in which any persons might act if he or they were carrying on upon his or their own behalf the businesses of the Company or any of them; to carry on all or any of the businesses of Manufacturers and Agents for the Sale and Purchase of, and Dealers in Plant, Machinery, Engines, Apparatus, Patterns, Implements and Tools of every description, and to purchase or otherwise acquire and use or turn to account and generally deal in any patents or inventions in relation to any of the businesses or operations of the Company; and to buy, sell, manufacture, repair, alter, improve, manipulate, prepare for market, let on hire, and generally deal in all kinds of plant, machinery, apparatus, tools, utensils, materials, produce, substances, articles, and things for the purpose of any of the businesses specified herein, or likely to be required by customers or other persons having, or about to have, dealings with the Company.
- (B) To carry on any other business (whether manufacturing or otherwise) which may seem to the Company capable of being conveniently carried on in connection with the above objects, or calculated directly or indirectly to enhance the value of or render more profitable any of the Company's property.
- (C) To purchase or by any other means acquire any freehold, leasehold, or other property for any estate or interest whatever, and any rights, privileges, or easements over or in respect of any property, and any buildings, offices, factories, mills, works, wharves, roads, railways, trainways, machinery, engines, rolling stock, vehicles, plant, live and dead stock, barges, vessels, or things, and any real or personal property or rights whatsoever which may be necessary for, or may be conveniently used with, or may enhance the value of any other property of the Company.

- (D) To build, construct, maintain, alter, enlarge, pull down, and remove or replace any buildings, offices, factories, mills, works, wharves, roads, railways, tramways, machinery, engines, walls, fences, banks, dams, sluices, or watercourses and to clear sites for the same, or to join with any person, firm, or company in doing any of the things aforesaid, and to work, manage, and control the same or join with others in so doing.
- (E) To apply for, register, purchase, or by other means acquire and protect, prolong, and renew, whether in the United Kingdom or elsewhere, any patents, patent rights, brevets d'invention, licences, trade marks, designs, protections, and concessions which may appear likely to be advantageous or useful to the Company, and to use and turn to account and to manufacture under or grant licences or privileges in respect of the same, and to expend money in experimenting upon and testing and in improving or seeking to improve any patents, inventions, or rights which the Company may acquire or propose to acquire.
- (F) To acquire and undertake the whole or any part of the business, goodwill, and assets of any person, firm, or company carrying on or proposing to carry on any of the businesses which this Company is authorised to carry on, and as part of the consideration for such acquisition to undertake all or any of the liabilities of such person, firm, or company, or to acquire an interest in, amalgamate with, or enter into partnership or into any arrangement for sharing profits, or for co-operation, or for limiting competition, or for mutual assistance with any such person, firm, or company, and to give or accept, by way of consideration for any of the acts or things aforesaid or property acquired, any Shares, Debentures, Debenture Stock, or securities that may be agreed upon, and to hold and retain, or sell, mortgage, and deal with any shares, debentures, debenture stock, or securities so received.
- (G) To improve, manage, cultivate, develop, exchange, let on lease or otherwise, mortgage, charge, sell, dispose of, turn to account, grant rights and privileges in respect of, or otherwise deal with all or any part of the property and rights of the Company.
- (H) To invest and deal with the moneys of the Company not immediately required in such shares or upon such securities and in such manner as may from time to time be determined.
- (I) To lend and advance money or give credit to such persons, firms, or companies and on such terms as may seem expedient, and in particular to customers of and others having dealings with the Company, and to give guarantees or become security for any such persons, firms, or companies.
- (J) To borrow or raise money in such manner as the Company shall think fit, and in particular by the issue of Debentures or Debenture Stock (perpetual or otherwise) and to secure the repayment of any money borrowed, raised, or owing, by mortgage, charge, or lien upon the whole or any part of the Company's property or assets (whether present or future), including its uncalled Capital, and also by a similar mortgage, charge, or lien to secure and guarantee the performance by the Company of any obligation or liability it may undertake.
- (K) To draw, make, accept, endorse, discount, execute, and issue promissory notes, bills of exchange, bills of lading, warrants, debentures, and other negotiable or transferable instruments.

- (L) To apply for, promote, and obtain any Act of Parliament, Provisional Order, or Licence of the Board of Trade or other authority for enabling the Company to carry any of its objects into effect, or for effecting any modification of the Company's constitution, or for any other purpose which may seem expedient, and to oppose any proceedings or applications which may seem calculated directly or indirectly to prejudice the Company's interests.
- (M) To enter into any arrangements with any Governments or authorities (supreme, municipal, local, or otherwise), or any companies, firms, or persons that may seem conducive to the attainment of the Company's objects or any of them, and to obtain from any such Government, authority, company, firm, or person any charters, contracts, decrees, rights, privileges, and concessions which the Company may think desirable, and to carry out, exercise, and comply with any such charters, contracts, decrees, rights, privileges, and concessions.
- (N) To subscribe for, take, purchase, or otherwise acquire and hold shares or other interests in or securities of any other company having objects altogether or in part similar to those of this Company or carrying on any business capable of being carried on so as directly or indirectly to benefit this Company.
- (O) To act as agents or brokers and as trustees for any person, firm, or company, and to undertake and perform sub-contracts, and also to act in any of the businesses of the Company through or by means of agents, brokers, sub-contractors, or others.
- (P) To remunerate any person, firm, or company rendering services to this Company, either by cash payment or by the allotment to him or them of Shares or securities of the Company credited as paid up in full or in part or otherwise as may be thought expedient.
- (Q) To pay all or any expenses incurred in connection with the promotion, formation, and incorporation of the Company, or to contract with any person, firm, or company to pay the same, and to pay commissions to brokers and others for underwriting, placing, selling, or guaranteeing the subscription of any Shares, Debentures, Debenture Stock, or securities of this Company.
- (R) To support and subscribe to any charitable or public object, and any institution, society, or club which may be for the benefit of the Company or its employes, or may be connected with any town or place where the Company carries on business; to give or award pensions, annuities, gratuities, and superannuation or other allowances or benefits or charitable aid to any persons who are or have been Directors of, or who are or have been employed by, or who are serving or have served the Company, and to their wives, widows, children, and other relatives and dependents of such persons; to make payments towards insurance; and to set up, establish, support, and maintain superannuation and other funds or schemes (whether contributory or non-contributory) for the benefit of any of such persons and of their wives, widows, children, and other relatives and dependents.
- (S) To promote any other company for the purpose of acquiring the whole or any part of the business or property and undertaking any of the liabilities of this Company, or of undertaking any business or operations which may appear likely to assist or benefit this Company or to enhance the value of any property or business of this Company, and to place or

guarantee the placing of, underwrite, subscribe for, or otherwise acquire all or any part of the shares or securities of any such company as aforesaid.

- (r) To sell or otherwise dispose of the whole or any part of the business or property of the Company, either together or in portions, for such consideration as the Company may think fit, and in particular for shares, debentures, or securities of any company purchasing the same.
- (u) To distribute among the Members of the Company in kind any property of the Company, and in particular any shares, debentures, or securities of other companies belonging to this Company or of which this Company may have the power of disposing.
- (v) To procure the Company to be registered or recognised in any Dominion or Dependency and in any Foreign Country or Place.
- (w) To do all such other things as may be deemed incidental or conducive to the attainment of the above objects or any of them.

It is hereby expressly declared that each Sub-Clause of this Clause shall be construed independently of the other Sub-Clauses hereof, and that none of the objects mentioned in any Sub-Clause shall be deemed to be merely subsidiary to the objects mentioned in any other Sub-Clause.

4. The Liability of the Members is Limited.

5. The Share Capital of the Company is £1,000, divided into 1,000 Shares of £1 each.

We, the several persons whose Names, Addresses, and Descriptions are subscribed are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of Shares in the Capital of the Company set opposite our respective names.

NAMES, ADDRESSES, AND DESCRIPTIONS OF SUBSCRIBERS.	Number of Shares taken by each Subscriber.
<i>Paul Alexander</i> (PAUL ALEXANDER). "WOODRISINGS", SHOOTERS' WAY, BERKHAMSTED, HERTS. RESEARCH PHYSICIST	1 (One)
<i>Malcolm Edward Boston</i> (MALCOLM EDWARD BOSTON) 19 ST REGIS, CHESTERTON ROAD, CAMBRIDGE RESEARCH ENGINEER.	1 (One)

Dated the *Kenlth* day of *October*, 1950.

Witness to the above Signatures—

J. H. Bartram
 (J. H. BARTRAM)
 8 Market Hill
 Cambridge
 Solicitor



488238/4
The Companies Act, 1948

COMPANY LIMITED BY SHARES

11 NOV 1950

Articles of Association

OF



Vacuum Research (Cambridge) LIMITED.

PRELIMINARY.

1. The regulations contained in Part I of Table A in the First Schedule to The Companies Act, 1948 (such Table being hereinafter called "Table A"), shall apply to the Company save in so far as they are excluded or varied hereby: that is to say, Clauses 24, 53, 75 and 77 in Part I of Table A shall not apply to the Company; and in addition to the remaining Clauses in Part I of Table A, as varied by these Articles, the following shall be the regulations of the Company.

2. The Company is a Private Company and Clauses 2, 4, 5 and 6 (but not Clauses 1 and 3) in Part II of Table A shall also apply to the Company.

SHARE CAPITAL AND SHARES.

3. The original Share Capital of the Company is £1,000, divided into 1,000 Shares of £1 each.

4. Subject to the provisions of Article 7 hereof, the Shares shall be under the control of the Directors, who may allot and dispose of or grant options over the same to such persons; on such terms; and in such manner as they think fit.

5. The lien conferred by Clause 11 in Part I of Table A shall attach to fully paid up Shares, and to all Shares registered in the name of any person indebted or under liability to the Company, whether he shall be the sole registered holder thereof or shall be one of two or more joint holders.

TRANSFER OF SHARES.

6. No Share shall be transferred otherwise than in accordance with the following provisions:—

- (A) The person proposing to transfer any Share (hereinafter called "the proposing transferor") shall give notice in writing (hereinafter called "the transfer notice") to the Company that he desires to transfer the same and such notice shall specify the sum he fixes as the fair value and shall constitute the Company his agent for the sale of the Share to any Member of the Company at the price so fixed, or, at the option of the purchaser, at the fair value to be fixed by the Auditor in accordance with Sub-Article (c) of this Article. The transfer notice may include two or more Shares, and in such case shall operate as if it were a separate notice in respect of each. The transfer notice shall not be revocable except with the sanction of the Directors.

- (B) If the Company shall within the period of three calendar months after being served with the transfer notice find a Member or Members willing to purchase the Share or Shares mentioned in the transfer notice (hereinafter called "the purchaser") and shall give notice thereof to the proposing transferor he shall be bound upon payment of the said price to transfer the Share or Shares to the purchaser, who shall be bound to complete the purchase within fourteen days from the service of the last mentioned notice.
- (C) In case any difference arises between the proposing transferor and the purchaser as to the fair value of a Share the Auditor shall, on the written application of either party, certify in writing the sum which in his opinion is the fair value and such sum shall be deemed to be the fair value, and in so certifying the Auditor shall be considered to be acting as an expert and not as an arbitrator; and accordingly The Arbitration Act, 1950, shall not apply: Provided always that the fair value shall not (except as hereinafter provided) exceed the amount paid up or credited as paid up on the Share in respect of any transaction arising out of a transfer notice served within three years of the date of the incorporation of the Company; And Provided further that the fair value shall not (except as hereinafter provided) exceed one and a quarter times the amount paid up or credited as paid on the Share; Provided always that there shall be no limitation of the fair value in respect of any transaction arising out of a transfer notice served by or on behalf of the personal representatives of a deceased Member.
- (D) If in any case the proposing transferor after having become bound as aforesaid makes default in transferring the Share or Shares the Company may receive the purchase money on his behalf, and may authorise some person to execute a transfer of the Share or Shares in favour of the purchaser, who shall thereupon be registered as the holder of the Share or Shares. The receipt of the Company for the purchase money shall be a good discharge to the purchaser, and after his name has been entered in the Register of Members in purported exercise of the aforesaid power the validity of the proceedings shall not be questioned by any person.
- (E) If the Company shall not within the period of twenty eight days after being served with the transfer notice find a Member or Members willing to purchase all the Shares mentioned in the transfer notice and give notice in manner aforesaid the proposing transferor shall at any time within three calendar months afterwards be at liberty to sell and transfer the said Shares to any person and at any price, and the Directors shall not be at liberty to decline or suspend the registration of any transfer of Shares made pursuant to this Sub-Article.
- (F) The Shares specified in any transfer notice given to the Company as aforesaid shall be offered by the Company in the first place to the Members (other than the proposing transferor) as nearly as may be in proportion to the existing Shares held by them respectively and the offer shall in each case limit the time within which the same if not accepted, will be deemed to be declined, and may notify to the Members that any Member who desires an allotment of Shares in excess of his proportion should in his reply state how many excess Shares he desires to have; and if all the Members do

not claim their proportions the unclaimed Shares shall be used for satisfying the claims in excess. If any Shares shall not be capable without fractions of being offered to the Members in proportion to their existing holdings, the same shall be offered to the Members, or some of them, in such proportions or in such manner as may be determined by lots drawn in regard thereto, and the lots shall be drawn in such manner as the Directors think fit.

- (g) The Directors shall refuse to register any transfer of Shares made or expressed to be made in contravention of the foregoing provisions of this Article.

ALTERATION OF CAPITAL.

7. Subject to any direction to the contrary that may be given by the Company in General Meeting, all new Shares shall before issue, be offered to such persons as at the date of the offer are entitled to receive notice from the Company of General Meetings in proportion as nearly as circumstances admit to the amount of their then existing holdings in the Company. The offer shall be made by notice specifying the number of Shares offered and limiting a time within which the offer if not accepted shall be deemed to be declined and after the expiration of that time or on receipt of an intimation from the person to whom the offer is made that he declines to accept the Shares offered, the Directors may dispose of those Shares in such manner as they think most beneficial to the Company.

GENERAL MEETINGS.

8. Every notice convening a General Meeting shall comply with the provisions of Section 136 (2) of The Companies Act, 1948, as to giving information to Members in regard to their right to appoint proxies; and notices of and other communications relating to any General Meeting which any Member is entitled to receive shall be sent to the Auditor for the time being of the Company.

9. Clause 54 in Part I of Table A shall be read and construed as if the words "Meeting shall be dissolved" were substituted for the words "Members present shall be a quorum."

VOTES OF MEMBERS.

10. If at any General Meeting a poll is duly demanded on a resolution to remove a Permanent Director from office, such Permanent Director shall on the poll being taken be entitled to ten votes for each Share of which he is the holder; and Clause 62 in Part I of Table A shall be modified accordingly. Any motion for the removal of two or more Permanent Directors from office shall be submitted to the Meeting as a separate resolution in respect of each of such Directors.

DIRECTORS.

11. Unless and until the Company in General Meeting shall otherwise determine, the number of Directors shall be not less than two nor more than five.

12. The following persons shall be the first Directors of the Company: PAUL ALEXANDER and MALCOLM EDWARD BOSTON. They shall be Permanent Directors of the Company, and subject to the provisions of Clause 88 in Part I of Table A each of them shall be entitled to hold such office so long as he shall live unless he shall be removed from office under Clause 96 in Part I of Table A; and accordingly Clauses 89 to 94 in Part I of Table A shall not apply to any Permanent Director.

13. The qualification of every Director shall be the holding of at least one Share of the Company. A Director may act before acquiring his qualification, but he shall acquire his qualification within two calendar months of being appointed a Director.

14. Clause 79 in Part I of Table A shall be read and construed as if the proviso to such Clause were omitted therefrom.

15. A Director may vote as a Director in regard to any contract or arrangement in which he is interested or upon any matter arising thereout, and if he shall so vote his vote shall be counted and he shall be reckoned in estimating a quorum when any such contract or arrangement is under consideration; and Clause 84 in Part I of Table A shall be modified accordingly.

ALTERNATE DIRECTOR.

16. Any Director whilst holding office as a Director may at any time appoint any person (whether a Director or a Member of the Company or not) to be an alternate Director in his place, and may at any time revoke any such appointment. An alternate Director so appointed shall not be entitled as such to receive any remuneration from the Company, but shall otherwise be subject to the provisions of these presents with regard to Directors. An alternate Director shall be entitled to receive notices of all Meetings of the Board and to attend as a Director at any such Meeting at which the appointing Director is not personally present, and generally to perform and exercise all the voting and other rights, powers, duties and functions of the appointing Director. When a Director who has been appointed alternate Director for another Director is present at a Meeting of the Board in the absence of his appointing Director he shall have one vote in his own rights and one vote for his appointing Director. An alternate Director shall *ipso facto* cease to be an alternate Director if his appointing Director ceases for any reason to be a Director. Every appointment and removal of an alternate Director shall be effected in writing under the hand of the appointing Director and shall be deposited at the Registered Office of the Company.

WINDING UP.

17. If the Company shall be wound up the assets remaining after payment of the debts and liabilities of the Company and the costs of the liquidation shall first be applied in repaying to the Members the amounts paid or credited as paid on the Shares held by them respectively, and the balance (if any) shall be distributed among the Members in proportion to the number of Shares held by them respectively: Provided always that the provisions hereof shall be subject to the rights of the holders of Shares (if any) issued upon special conditions.

NAMES, ADDRESSES, AND DESCRIPTIONS OF SUBSCRIBERS.

Paul Alexander
(PAUL ALEXANDER).
"WOODRISIMBS", SHOOTERS WAY,
BERKHAMSTED, HERTS.
RESEARCH PHYSICIST

Malcolm Edward Boston
(MALCOLM EDWARD BOSTON)
19 ST REGIS, CHESTERTON ~~ROAD~~, ROAD,
CAMBRIDGE
RESEARCH ENGINEER.

Dated the 6th day of October, 1950.

Witness to the above Signatures—

J. H. Bartram
(J. H. BARTRAM)
& Market Hill
Cambridge

Solicitor

DUPLICATE FOR THE FILE.

No. 488238



Certificate of Incorporation

I Hereby Certify, That

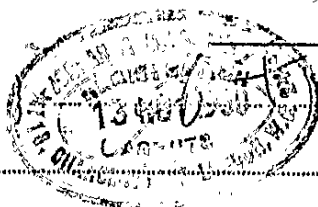
VACUUM RESEARCH (CAMBRIDGE) LIMITED

is this day Incorporated under the Companies Act, 1948, and that the
Company is Limited.

Given under my hand at London this Eleventh day of
November.....One Thousand Nine Hundred and Fifty

W. D. D. D.
Registrar of Companies.

Certificate
received by



Date

118
12/10/55
No. OF COMPANY 488,238



17
THE COMPANIES ACT, 1948

COMPANY LIMITED BY SHARES

(COPY)

Ordinary Resolution

(Pursuant to The Companies Act, 1948, Section 61)

OF

**Vacuum Research (Cambridge)
LIMITED**

Passed the 7th day of June, 1955

At an ADJOURNED GENERAL MEETING of the above-named Company,
duly convened, and held at No. 8 Market Hill, Cambridge, on the 7th day of
June, 1955, the following ORDINARY RESOLUTION was duly passed:—

That the capital of Vacuum Research (Cambridge) Limited be
increased to Six thousand pounds by the creation of five thousand
Ordinary Shares of One pound each to rank in all respects with the
existing capital.

Frank H. Cohen
M. E. Boston
Director

Presented to the Registrar of Companies
On the 4th day of July, 1955.



NO. OF COMPANY.....488238

[C.F. 10]



THE COMPANIES ACT, 1948.

Notice of Increase in Nominal Capital.

Pursuant to Section 63.

NAME OF COMPANY.....VACUUM RESEARCH (CAMBRIDGE)

LIMITED.

Cat. No. C.F.10.

JORDAN & SONS, LTD.,
115, Chancery Lane, London, W.C.2.

SHAW & SONS LTD.,
7, 8 & 9, Fetter Lane, London, E.C.4.

Law Stationers and Company Registration Agents.

P198 S1102 (11)

Presented



Notice of Increase in Nominal Capital.

To the REGISTRAR OF COMPANIES.

VACUUM RESEARCH (CAMBRIDGE) LIMITED,
hereby gives you notice pursuant to Section 63 of the Companies Act, 1948,
that by (a) Ordinary Resolution of the Company dated the
7th day of June 1955 the nominal Capital
of the Company has been increased by the addition thereto of the sum of
£ 5000 beyond the registered Capital of £ 1000

The additional Capital is divided as follows :—

Number of Shares.	Class of Share.	Nominal Amount of each Share.
5000	Ordinary	One pound

The conditions (e.g., voting rights, dividend rights, winding-up rights, etc.), subject to which the new Shares have been, or are to be, issued, are as follows :—

To rank pari passu in all respects with existing Ordinary Shares

~~of the new Shares are Preference Shares, and are (b) not~~
~~redeemable~~

(Signature) M. B. S. S. S.

(State whether Director, or Secretary) Director

Dated the 7th day of June 1955

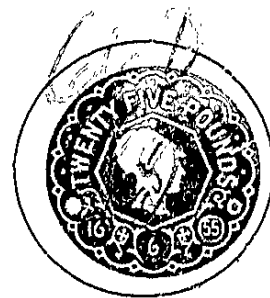
(a) " Ordinary," "Extraordinary" or " Special "

(b) Delete as appropriate.

This margin to be reserved for binding.

NO. OF COMPANY.....488238

COMPANY HAVING A SHARE CAPITAL.



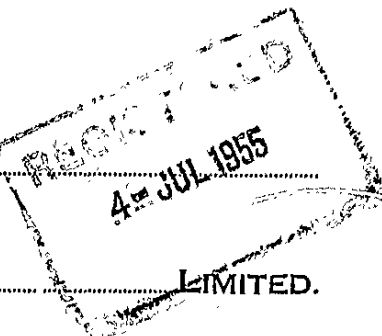
Inland
Revenue
Duty Stamp
to be
impressed
here.

Statement of Increase of Nominal Capital.

Pursuant to Section 112 of the Stamp Act, 1891.

(NOTE.—The stamp duty on an increase of Nominal Capital is Ten shillings for every £100 or fraction of £100—Section 41, Finance Act, 1933.)

NAME OF
COMPANY.....VACUUM RESEARCH (CAMBRIDGE)



This statement is to be filed within 15 days after the passing of the Resolution by which the Registered Capital is increased, and if not so filed Interest on the Duty at the rate of 5 per cent. per annum from the passing of the Resolution is also payable (s. 5, Revenue Act, 1903).

NOTE.—Attention is drawn to Section 63 of the Companies Act, 1948, relative to the filing of a Notice of Increase and a printed copy of the Resolution authorising the increase.

CAT. No. CA.26.

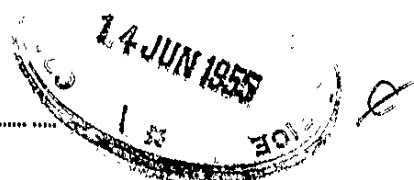
JORDAN & SONS, LTD.,
116, Chancery Lane, London, W.C.2.

SHAW & SONS, LTD.,
7, 8 & 9, Fetter Lane, London, E.C.4.

Law Stationers and Company Registration Agents.

P205. S1592(1)

Presented for registration by



The Nominal Capital

OF

VACUUM RESEARCH (CAMBRIDGE) LIMITED,

has by a Resolution of the Company dated the seventh day
of June, 19 55, been increased by the addition thereto of
the sum of Five thousand Pounds,
divided into five thousand Shares
of One pound each,
beyond the Registered Capital of One thousand pounds

*Signature

H. P. Byston

Description Director

Date 7th June 19 55

*This Statement must be signed by an officer of the Company.

This margin is reserved for binding, and must not be written across.

No. 488,238.

THE COMPANIES ACT, 1948

COMPANY LIMITED BY SHARES

RESOLUTIONS

- of -

VACUUM RESEARCH (CAMBRIDGE) LIMITED

AT the ANNUAL GENERAL MEETING of VACUUM RESEARCH (CAMBRIDGE) LIMITED duly convened and held at Quayside, Bridge Street, Cambridge, on Monday, 23rd December, 1957, the Resolution numbered (1) below was duly passed as an ORDINARY RESOLUTION and the Resolution numbered (2) below was duly passed as a SPECIAL RESOLUTION:-

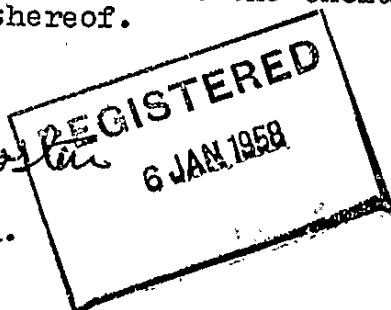
ORDINARY RESOLUTION

- (1) THAT the capital of the Company be increased to £10,000 by the creation of 4,000 new Ordinary Shares of £1 each which shall be at the disposal of the Directors who may offer, allot, grant options over or otherwise dispose of them to such persons and on such terms as they think fit.

SPECIAL RESOLUTION

- (2) THAT the Regulations contained in the document submitted to the Meeting and for the purpose of identification subscribed by the Chairman thereof be approved and adopted as the Articles of Association of the Company in substitution for and to the exclusion of all the existing Articles thereof.

Chairman.



No. 488,238.

THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

NEW ARTICLES OF ASSOCIATION

- of -

VACUUM RESEARCH (CAMBRIDGE) LIMITED
(adopted by Special Resolution passed
23rd December, 1957)

2

THE COMPANIES ACT, 1948.
COMPANY LIMITED BY SHARES.

ARTICLES OF ASSOCIATION

- of -

VACUUM RESEARCH (CAMBRIDGE) LIMITED

PRELIMINARY

1. The regulations contained in Part I of Table A in the First Schedule to The Companies Act, 1948 shall not apply to the Company. The Company is a private Company and subject as hereinafter provided and except where the same are varied by or inconsistent with these presents the regulations contained in Part II of Table A in the First Schedule to The Companies Act, 1948 shall apply to the Company. Subject as aforesaid reference herein to regulations in Table A shall be construed as referring to those in Part I of Table A in the First Schedule to the Companies Act, 1948.

INTERPRETATION

2. In these regulations :-

The Board means the Board of Directors of the Company or the Directors present at a duly convened Meeting of Directors at which a quorum is present. Regulation 1 of Table A shall be modified accordingly.

BUSINESS

3. Any branch or kind of business which the Company is either expressly or by implication authorised to undertake may be undertaken by the Board at such time or times as it may consider expedient and further may be suffered by it to be in abeyance whether such branch or kind of business may have been actually commenced or not so long as the Board may consider it expedient not to commence or proceed with the same.

4. The Registered Office shall be at such place in England as the Board shall from time to time appoint.

SHARE CAPITAL

5. The share capital of the Company at the date of adoption of these presents is £10,000 divided into 10,000 Shares of £1 each.

SHARES

6. Subject to the provisions of Article 8 hereof, the unissued shares of the Company shall be at the

disposal of the Board which may allot, grant options over or otherwise dispose of them to such persons, at such times and for such consideration and upon such terms and conditions as the Board may determine, but so that no shares shall be issued at a discount except in accordance with Section 57 of the Act.

LIEN

7. The liens given by Regulation 11 of Table A shall extend to every share in the capital of the Company whether fully paid or not, and to all shares registered in the name of any person indebted or under liability to the Company, whether he shall be the sole registered holder thereof or shall be one of two or more joint holders.

ALTERATION OF CAPITAL

8. Subject to any direction to the contrary that may be given by the Company in General Meeting, all new shares created after the date of adoption of these presents shall before issue be offered to such persons as at the date of the offer are entitled to receive notice from the Company of General Meetings in proportion as nearly as circumstances admit to the amount of their then existing holdings in the Company. The offer shall be made by notice specifying the number of shares offered and limiting a time within which the offer if not accepted shall be deemed to be declined and after the expiration of that time or on receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the Directors may dispose of those shares in such manner as they think most beneficial to the Company.

GENERAL MEETINGS

9. Every notice convening a General Meeting shall comply with the provisions of Section 136(2) of The Companies Act, 1948, as to giving information to Members in regard to their right to appoint proxies, and notices of and other communications relating to any General Meeting which any Member is entitled to receive shall be sent to the Auditor for the time being of the Company.

10. Regulation 54 of Table A shall be read and construed as if the words "Meeting shall be dissolved" were substituted for the words "Members present shall be a quorum".

11. A poll may be demanded at any General Meeting by the Chairman or by any Member present in person or by proxy and entitled to vote. Regulation 58 of Table A shall be modified accordingly.

12. Subject to the provisions of the Act a Resolution in writing signed by all the Members for the time being entitled to receive notice of and attend and vote at General Meetings (or being corporations, by their duly authorised representatives) shall be as valid and effective as if the same had been passed at a General Meeting of the Company duly convened and held, and may

4

consist of several documents in the like form, each signed by one or more Members. Regulation 5 of Part II of Table A shall not apply.

DIRECTORS

13. Unless and until otherwise determined by the Company in General Meeting the Directors shall not be less than two nor more than five in number. Regulation 75 of Table A shall be modified accordingly.

14. Any Director who, by request, performs special services, or goes or resides abroad for any purpose of the Company shall (unless otherwise expressly resolved by the Company in General Meeting) receive such extra remuneration by way of salary, percentage of profits or otherwise as the Board may determine, which shall be charged as part of the Company's ordinary working expenses.

15. A Director shall not be required to hold any shares in the capital of the Company to qualify him for office. Regulation 77 of Table A shall not apply to the Company.

16. Each Director shall have the power to nominate (1) any other Director or (2) any person approved for that purpose by a Resolution of the Board to act as alternate Director in his place during his absence and at his discretion to remove such alternate Director and, on such appointment being made the alternate Director (except as regards the power to appoint an alternate) shall be subject in all respects to the terms and conditions existing with reference to the other Directors of the Company, and each alternate Director, while so acting, shall exercise and discharge all the functions, powers and duties of the Director he represents. An alternate Director shall ipso facto cease to be an alternate Director if his appointor ceases for any reason to be a Director provided that if any Director retires but is re-elected at the same Meeting, any appointment made by him pursuant to this Article which was in force immediately before his retirement shall remain in force as though he had not retired. Any Director acting as alternate shall have an additional vote for the Director for whom he acts as alternate.

17. All appointments and removals of an alternate Director shall be effected by instrument in writing delivered at the Registered Office of the Company and the instrument of appointment shall as nearly as circumstances will admit, be in the form or to the effect following:-

"VACUUM RESEARCH (CAMBRIDGE) LIMITED.

I
a Director of the above-named Company do

hereby appoint
of
to act as alternate Director in my place during
my absence and to exercise and discharge all
duties as a Director of the Company.

AS WITNESS my hand the
19 . " day of

18. The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking property and uncalled capital or any part thereof and to issue debentures and other securities whether outright or as collateral security for any debt, liability or obligation of the Company or of any third party. Regulation 79 of Table A shall not apply to the Company.

19. A Director shall be capable of contracting or participating in the profits of any contract with the Company in the same manner as if he were not a Director subject to his complying with the provisions of Section 199 of the Act and notwithstanding his interest may vote thereon and be counted in the quorum of any Meeting at which he is present. Regulation 84 of Table A shall be modified accordingly.

20. The office of Director shall be vacated if the Director

- (a) ceases to be a Director by virtue of Section 182 or 185 of the Act;
- (b) becomes bankrupt or insolvent or makes any arrangement or composition with his creditors generally; or
- (c) becomes prohibited from being a Director by reason of any order made under Section 188 of the Act; or
- (d) becomes of unsound mind; or
- (e) shall for more than six months have been absent without permission of the Directors from Meetings of the Directors held during that period; or
- (f) resigns his office by notice in writing to the Company; or
- (g) is convicted of any indictable offence, not being an offence under the Road Traffic Act, 1930, or any statutory modification or re-enactment thereof.

Regulation 88 of Table A shall be modified accordingly.

21. Regulations 89 to 94 inclusive of Table A shall not apply to the Company.

PROCEEDINGS OF DIRECTORS

22. The continuing Directors may act, notwith-

standing any vacancy in their body, but, if and so long as their number is reduced below the number fixed by or pursuant to Article 13 as the minimum number of Directors, the continuing Directors or Director may act for the purpose of convening a General Meeting of the Company for the consideration of a resolution appointing a Director or Directors in order to increase the number of Directors to that number at least, but for no other purpose. Regulation 100 of Table A shall not apply to the Company.

23. A Resolution in writing signed by all the Directors entitled to vote shall be as effective as a Resolution passed at a Meeting of the Directors duly convened and held, and may consist of several documents in the like form, each signed by one or more of the Directors. Regulation 106 of Table A shall not apply to the Company.

MANAGING DIRECTOR

24. The Directors may from time to time appoint one or more of their body to an executive office (including that of Managing Director, Manager, or any other salaried office) for such period and on such terms as they shall think fit, and subject to the terms of any Agreement entered into in any particular case, may revoke such appointment. Subject to the terms of any agreement as aforesaid the appointment of a Director so appointed shall be automatically determined ipso facto if he ceases from any cause to be a Director. Regulation 107 of Table A shall not apply to the Company.

25. A Managing Director, Manager or other executive officer as aforesaid shall receive such remuneration (either by way of salary, commission, participation in profits, or otherwise howsoever, whether similar to the foregoing or not) as the Directors may determine. Regulation 108 of Table A shall not apply to the Company.

PENSIONS AND ALLOWANCES

26. The Board may grant gratuities, retiring pensions or annuities or other allowances, including allowances on death, to any person or to the widow or dependants of any person in respect of services rendered by him to the Company as Managing Director, Manager or in any other office or employment under the Company or indirectly as an officer or employee of any subsidiary company of the Company or of its holding company (if any) notwithstanding that he may be or may have been a Director of the Company and may make payments towards insurances or trusts for such purposes in respect of such persons and may include rights in respect of such pensions, annuities and allowances in the terms of engagement of any such person.

WINDING UP

27. If the Company shall be wound up the assets remaining after payment of the debts and liabilities

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of the Company and the costs of the liquidation shall first be applied in repaying to the Members the amounts paid or credited as paid on the shares held by them respectively and the balance (if any) shall be distributed among the Members in proportion to the number of shares held by them respectively. Provided always that the provisions hereof shall be subject to the rights of the holders of shares (if any) issued upon special conditions.

This is a copy of the new Articles of Association which were, by Special Resolution of the Company, duly passed on the Twenty third day of December, 1957 adopted in lieu of and to the exclusion of the Articles of Association then subsisting.

M. E. Boston

Chairman.

We hereby certify that this print has
been produced by Type - Lithography
SOLICITORS' & GENERAL TYPEWRITING CO.
8, NEW SQUARE, LINCOLN'S INN, W.C.2.

THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

NEW ARTICLES OF ASSOCIATION

- of -

VACUUM RESEARCH (CAMBRIDGE)
LIMITED

(adopted by Special
Resolution passed 23rd
December, 1957).

488 238
Number of
Company

Form



THE COMPANIES ACT, 1948

Notice of Increase in Nominal Capital

Pursuant to section 63

Insert the
Name
of the
Company

VACUUM RESEARCH (CAMBRIDGE)

LIMITED

NOTE.—This notice and a printed copy of the Resolution authorising the increase must be filed within 15 days after the passing of the Resolution. If default is made the Company and every officer in default is liable to a default fine (sec. 63 (3) of the Act).



Printed by

Slaughter and May, (AMB/JH)

18, Austin Friars,

London, E.C. 2.

The Solicitors' Law Stationery Society, Limited
Chancery Lane, W.C.2; 3 Bucklersbury, E.C.4; 49 Bedford Row, W.C.1; 6 Victoria Street, S.W.1;
Hanover Street, W.1; 55-59 Newhall Street, Birmingham, 3; 19 & 21 North John Street, Liverpool, 2;
30 John Dalton Street, Manchester, 2; 31 Charles Street, Cardiff; and 157 Hope Street, Glasgow, C.2.

PRINTERS AND PUBLISHERS OF COMPANIES BOOKS AND FORMS

C290

To THE REGISTRAR OF COMPANIES.

Vacuum Research (Cambridge) Limited

..... Limited, hereby gives you notice, pursuant to
*Ordinary Section 63 of the Companies Act, 1948, that by an * Ordinary
"Extra-ordinary", or
"Special" Resolution of the Company dated the 23rd day of December, 1957,
the Nominal Capital of the Company has been increased by the addition thereto of
the sum of £ 4,000 beyond the Registered Capital
of £ 6,000.

The additional Capital is divided as follows:—

Number of Shares	Class of Share	Nominal amount of each Share
4,000	Ordinary	One Pound

The Conditions (e.g., voting rights, dividend rights, winding-up rights, etc.)
subject to which the new shares have been, or are to be, issued are as follows:—

The new Ordinary Shares will on issue rank *pari passu*
with the existing issue Ordinary Shares.

*. * If any of the new shares are Preference Shares state whether they are redeemable or not.

Signature: Gerald H. Cohen

State whether Director } Director
or Secretary }

Dated the 23rd day of January, 19 58

Note.—This margin is reserved for binding and must not be written across

488 238
Number of } ~~448, 238~~
Company }

Form No. 26a

THE STAMP ACT 1891

(54 & 55 VICT., CH. 39)

COMPANY LIMITED BY SHARES



Statement of Increase of the Nominal Capital OF

VACUUM RESEARCH (CAMBRIDGE)

LIMITED

Pursuant to Section 112 of the Stamp Act 1891 as amended by Section 7 of the Finance Act 1899, by Section 39 of the Finance Act 1920, and Section 41 of the Finance Act 1933.

NOTE.—The Stamp duty on an increase of Nominal Capital is Ten Shillings for every £100 or fraction of £100.

This Statement is to be filed with the Notice of Increase which must be filed pursuant to Section 63 (1) of the Companies Act 1948. If not so filed within 15 days after the passing of the Resolution by which the Capital is increased, interest on the duty at the rate of 5 per cent. per annum from the date of the passing of the Resolution is also payable. (Section 5 of the Revenue Act 1903.)

Presented by

Slaughter and May, (AMB/JH)

18, Austin Friars,

London, E.C. 2.

The Solicitors' Law Stationery Society, Limited.

20 Chancery Lane, W.C.2; 3 Bucklersbury, E.C.4; 49 Bedford Row, W.C.1; 6 Victoria Street, S.W.1;
11 Hanover Street, W.1; 55-59 Newhall Street, Birmingham, 3; 19 & 21 North John Street, Liverpool, 2;
2-30 John Dalton Street, Manchester, 2; 31 Charles Street, Cardiff; 157 Hope Street, Glasgow, C.2.

PRINTERS AND PUBLISHERS OF COMPANIES' BOOKS AND FORMS

THE NOMINAL CAPITAL

OF

Vacuum Research (Cambridge) Limited

has by a Resolution of the Company dated

23rd December, 1957 *been increased by*

*the addition thereto of the sum of £*4,000*,*

divided into :—

4,000 Ordinary *Shares of* One Pound *each*

 Shares of *each*

beyond the registered Capital of £6,000

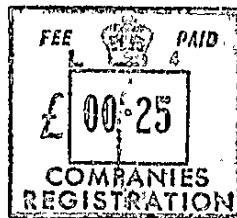
Signature Gerald H. Cohen

(State whether Director or Secretary) Director

Dated the third day of January, 1958

Note.—This margin is reserved for binding and must not be written across

Number of
Company



THE COMPANIES ACT, 1948

COMPANY LIMITED BY SHARES

(COPY)

Special Resolution

(Pursuant to The Companies Act, 1948, Section 141 [and any other Section of the Act under which the Special Resolution is passed*])

OF

VACUUM RESEARCH (CAMBRIDGE) LIMITED

LIMITED

REGISTERED

23 JUL 1965

Passed the 23rd day of July, 19 65

AT AN EXTRAORDINARY GENERAL MEETING of the above-named Company, duly convened, and held at Quayside, Bridge Street, Cambridge.

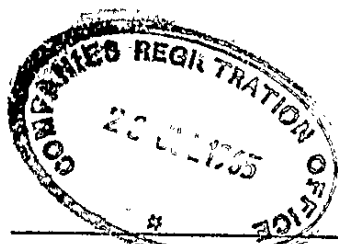
in the County of Cambridge, on the 23rd day of July, 19 65, the following SPECIAL RESOLUTION(S) was duly passed:—

[Here set out the exact words of the Special Resolution or Resolutions as passed.]

That the name of the company be changed to Vacuum Research Limited.

D.T. MILTON

Secretary



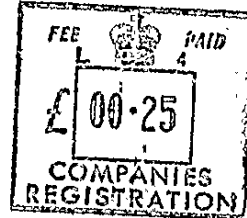
* Where this Form is returned to the Publishers to be printed, they will fill in the correct references to the Sections under which the Special Resolution was passed.

† Here insert the full address of the place where the Meeting was held at which the Resolution was passed.

No. 488238



B



Reference: C.R. 98/1250/65

BOARD OF TRADE

COMPANIES ACT, 1948

VACUUM RESEARCH (CAMBRIDGE) LIMITED

Pursuant to the provisions of Sub-Section (1) of Section 18 of the Companies Act, 1948, the Board of Trade hereby approve of the name of the above-named Company being changed to

VACUUM RESEARCH LIMITED

REGISTERED

30 JUL 1965

Signed on behalf of the Board of Trade

this THIRTIETH DAY OF JULY

ONE THOUSAND NINE HUNDRED AND SIXTY FIVE.

L.S. Whitfield

C.60

2333 Wt.44366 D.4133 12M 2/65 T.P. Gp.658.

Authorised in that behalf by the
President of the Board of Trade

No. C.172

No. 489238

DUPLICATE FOR THE FILE



Certificate of Incorporation on Change of Name

Whereas

VACUUM RESEARCH (CAMBRIDGE) LIMITED

was incorporated as a limited company under the

COMPANIES ACT, 1948,

on the ELEVENTH DAY OF NOVEMBER, 1950

And Whereas by special resolution of the Company and with the approval of the Board of Trade it has changed its name.

Now therefore I hereby certify that the Company is a limited company incorporated under the name of

VACUUM RESEARCH LIMITED

Given under my hand at London, this THIRTIETH DAY OF JULY

ONE THOUSAND NINE HUNDRED AND SIXTY FIVE.

Certificate received by

L. S. W. W. W. W.

Assistant Registrar of Companies.

Date

30 JUL 1965

Number of } 488,238 / 55
Company }

Form No. 103

THE COMPANIES ACT, 1948



A 5s.
Companies
Registration Fee
Stamp must
be impressed
here.

Notice of Place where Register of Members is kept or of any Change in that Place

(Pursuant to section 110 (3))

Insert the
Name of
the Company

VACUUM RESEARCH

LIMITED

Section 110 of the Companies Act, 1948, provides that:—

* * * * *

(3) Every company shall send notice to the registrar of companies of the place where its register of members is kept and of any change in that place:

Provided that a company shall not be bound to send notice under this subsection where the register has, at all times since it came into existence or, in the case of a register in existence at the commencement of this Act, at all times since then, been kept at the registered office of the company.

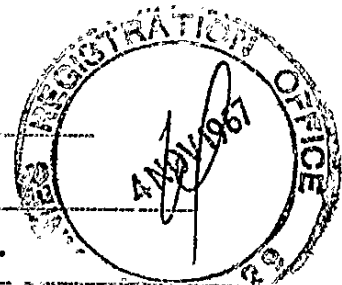
(4) Where a company makes default in complying with subsection (1) of this section or makes default for fourteen days in complying with the last foregoing subsection, the company and every officer of the company who is in default shall be liable to a default fine.

Presented by

The Secretary,

3, Gracechurch Street,

London, E.C.3.



The Solicitors' Law Stationery Society, Limited,
12 Chancery Lane, W.C.2; 3 Bucklersbury, E.C.4; 49 Bedford Row, W.C.1; 6 Victoria Street, S.W.1;
15 Hanover Street, W.1; 55-59 Newhall Street, Birmingham; 31 Charles Street, Cardiff; 19 & 21 North
John Street, Liverpool, 2; 28-30 John Dalton Street, Manchester, 2; and 157 Hope Street, Glasgow, C.2.

Notice of Place where Register of Members is kept or of any
Change in that Place.

To the REGISTRAR OF COMPANIES.

VACUUM RESEARCH LIMITED

hereby gives you notice, in accordance with subsection (3) of section 110
of the Companies Act, 1948, that the register of members of the Company
is kept at 3, Gracechurch Street,
London, E.C.3.

Signature.....

DP Knight

(State whether

Director or Secretary)

Secretary

Dated the 3rd day of November 1967.

NOTE.—This Margin is reserved for binding and must not be written across.

Number of } 488,238 / 56
Company }

THE COMPANIES ACTS 1948 TO 1967

Notice of place where Register of Directors' interests
in shares in, or debentures of, a company or its associated
companies is kept or of any change in that place
(Pursuant to section 29 (8) of the Companies Act 1967)

Insert the
Name of
the Company

VACUUM RESEARCH

LIMITED

To the REGISTRAR OF COMPANIES.

The above-named company hereby gives you notice, in accordance with
subsection (8) of section 29 of the Companies Act 1967, that the register of Directors'
interests in shares in, or debentures of, the company or any associated companies
is kept at..... 3, Gracechurch Street,
London, E.C.3.

Signed.....

[Signature]

State whether Director or Secretary..... Secretary

Date..... 3rd November 1967

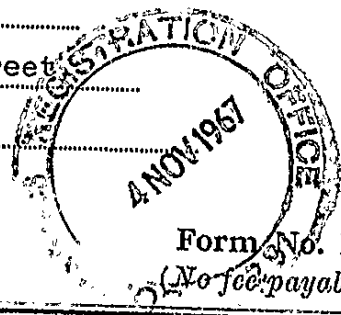
Presented by :

Presentor's reference :

The Secretary,

3, Gracechurch Street

London, E.C.3.



Form No. R6
(No fee payable)

Printed and published by
The Solicitors' Law Stationery Society, Limited,
191-192 Fleet Street, E.C.4; 3 Bucklersbury, E.C.4; 49 Bedford Row, W.C.1; 6 Victoria Street, S.W.1;
15 Hanover Street, W.1; 55-59 Newhall Street, Birmingham, 3; 31 Charles Street, Cardiff CF1 4EA;
19 & 21 North John Street, Liverpool, 2; 25-30, 36th Dalton Street, Manchester, 2; and 157 Hope Street

THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

MEMORANDUM OF ASSOCIATION

- of -

VACUUM RESEARCH LIMITED

1. The name of the Company is "VACUUM RESEARCH LIMITED".
2. The Registered Office of the Company will be situate in England.

3. The objects for which the Company is established are:-

(A) To undertake and carry out scientific, chemical and industrial researches and investigations, and experimental work of every description, and to carry on all or any of the businesses of Analysts, Consultants, Assayers, Samplers, and Consulting and Contracting Chemical Engineers, Physicists, Vacuum Research, General Research, Analytical, and Consulting Chemists, Manufacturers, Merchants, and Factors of and Dealers in all classes of Chemicals and Chemical Products, Intermediates, Compositions, Preparations and Derivatives of all kinds, and Chemical, Industrial, Pharmaceutical, Medicinal, and other Preparations and Articles of every description, and the Products and By-Products thereof; to employ properly qualified persons to act on the Company's behalf as Consultants, Research and Analytical Chemists, or otherwise in any manner in which any persons might act if he or they were carrying on upon his or their own behalf the businesses of the Company or any of them; to carry on all or any of the businesses of Manufacturers and Agents for the Sale and Purchase of, and Dealers in Plant, Machinery, Engines, Apparatus, Patterns, Implements and Tools of every description, and to purchase or otherwise acquire and use or turn to account and generally deal in any patents or inventions in relation to any of the businesses or operations of the Company; and to buy, sell, manufacture, repair, alter, improve, manipulate, prepare for market, let on hire, and generally deal in all kinds of plant, machinery, apparatus, tools, utensils, materials, produce, substances, articles, and things for the purpose of any of the businesses specified herein, or likely to be required by customers or other persons having, or about to have, dealings with the Company.

- (B) To carry on any other business (whether manufacturing or otherwise) which may seem to the Company capable of being conveniently carried on

in connection with the above objects, or calculated directly or indirectly to enhance the value of or render more profitable any of the Company's property.

(C) To purchase or by any other means acquire any freehold, leasehold, or other property for any estate or interest whatever, and any rights, privileges, or easements over or in respect of any property, and any buildings, offices, factories, mills, works, wharves, roads, railways, tramways, machinery, engines, rolling stock, vehicles, plant, live and dead stock, barges, vessels, or things, and any real or personal property or rights whatsoever which may be necessary for, or may be conveniently used with, or may enhance the value of any other property of the Company.

(D) To build, construct, maintain, alter, enlarge, pull down, and remove or replace any buildings, offices, factories, mills, works, wharves, roads, railways, tramways, machinery, engines, walls, fences, banks, dams, sluices, or watercourses and to clear sites for the same, or to join with any person, firm, or company in doing any of the things aforesaid, and to work, manage, and control the same or join with others in so doing.

(E) To apply for, register, purchase, or by other means acquire and protect, prolong, and renew, whether in the United Kingdom or elsewhere, any patents, patent rights, brevets d'invention, licences, trade marks, designs, protections, and concessions which may appear likely to be advantageous or useful to the Company, and to use and turn to account and to manufacture under or grant licences or privileges in respect of the same, and to expend money in experimenting upon and testing and in improving or seeking to improve any patents, inventions, or rights which the Company may acquire or propose to acquire.

(F) To acquire and undertake the whole or any part of the business, goodwill, and assets of any person, firm, or company carrying on or proposing to carry on any of the businesses which this Company is authorised to carry on, and as part of the consideration for such acquisition to undertake all or any of the liabilities of such person, firm, or company, or to acquire an interest in, amalgamate with, or enter into partnership or into any arrangement for sharing profits, or for co-operation, or for limiting competition, or for mutual assistance with any such person, firm, or company, and to give or accept, by way of consideration for any of the acts or things aforesaid or property acquired, any Shares, Debentures, Debenture Stock, or securities that may be

agreed upon, and to hold and retain, or sell, mortgage, and deal with any shares, debentures, debenture stock, or securities so received.

- (G) To improve, manage, cultivate, develop, exchange, let on lease or otherwise, mortgage, charge, sell, dispose of, turn to account, grant rights and privileges in respect of, or otherwise deal with all or any part of the property and rights of the Company.
- (H) To invest and deal with the moneys of the Company not immediately required in such shares or upon such securities and in such manner as may from time to time be determined.
- (I) To lend and advance money or give credit to such persons, firms, or companies and on such terms as may seem expedient, and in particular to customers of and others having dealings with the Company, and to give guarantees or become security for any such persons, firms, or companies.
- (J) To borrow or raise money in such manner as the Company shall think fit, and in particular by the issue of Debentures or Debenture Stock (perpetual or otherwise) and to secure the repayment of any money borrowed, raised, or owing, by mortgage, charge, or lien upon the whole or any part of the Company's property or assets (whether present or future), including its uncalled Capital, and also by a similar mortgage, charge, or lien to secure and guarantee the performance by the Company of any obligation or liability it may undertake.
- (K) To draw, make, accept, endorse, discount, execute, and issue promissory notes, bills of exchange, bills of lading, warrants, debentures, and other negotiable or transferable instruments.
- (L) To apply for, promote, and obtain any Act of Parliament, Provisional Order, or Licence of the Board of Trade or other authority for enabling the Company to carry any of its objects into effect, or for effecting any modification of the Company's constitution, or for any other purpose which may seem expedient, and to oppose any proceedings or applications which may seem calculated directly or indirectly to prejudice the Company's interests.
- (M) To enter into any arrangements with any Governments or authorities (supreme, municipal, local, or otherwise), or any companies, firms, or persons that may seem conducive to the attainment of the Company's objects or any of them, and to obtain from any such Government, authority, company, firm, or person any charters, contracts, decrees, rights, privileges, and concessions which the Company may think desirable, and to carry out, exercise, and comply with any such charters, contracts, decrees, rights, privileges, and concessions.
- (N) To subscribe for, take, purchase, or otherwise acquire and hold shares or other interests in or

securities of any other company having objects altogether or in part similar to those of this Company or carrying on any business capable of being carried on so as directly or indirectly to benefit this Company.

(O) To act as agents or brokers and as trustees for any person, firm, or company, and to undertake and perform sub-contracts, and also to act in any of the businesses of the Company through or by means of agents, brokers, sub-contractors, or others.

(P) To remunerate any person, firm, or company rendering services to this Company, either by cash payment or by the allotment to him or them of Shares or securities of the Company credited as paid up in full or in part or otherwise as may be thought expedient.

(Q) To pay all or any expenses incurred in connection with the promotion, formation, and incorporation of the Company, or to contract with any person, firm, or company to pay the same, and to pay commissions to brokers and others for underwriting, placing, selling, or guaranteeing the subscription of any Shares, Debentures, Debenture Stock, or securities of this Company.

(R) To support and subscribe to any charitable or public object, and any institution, society, or club which may be for the benefit of the Company or its employes, or may be connected with any town or place where the Company carries on business; to give or award pensions, annuities, gratuities, and superannuation or other allowances or benefits or charitable aid to any persons who are or have been Directors of, or who are or have been employed by, or who are serving or have served the Company, and to their wives, widows, children, and other relatives and dependants of such persons; to make payments towards insurance; and to set up, establish, support, and maintain superannuation and other funds or schemes (whether contributory or non-contributory) for the benefit of any of such persons and of their wives, widows, children, and other relatives and dependants.

(S) To promote any other company for the purpose of acquiring the whole or any part of the business or property and undertaking any of the liabilities of this Company, or of undertaking any business or operations which may appear likely to assist or benefit this Company or to enhance the value of any property or business of this Company, and to place or guarantee the placing of, underwrite, subscribe for, or otherwise acquire all or any part of the shares or securities of any such company as aforesaid.

(T) To sell or otherwise dispose of the whole or any part of the business or property of the

Company, either together or in proportions, for such consideration as the Company may think fit, and in particular for shares, debentures, or securities of any company purchasing the same.

- (U) To distribute among the Members of the Company in kind any property of the Company, and in particular any shares, debentures, or securities of other companies belonging to this Company or of which this Company may have the power of disposing.
- (V) To procure the Company to be registered or recognised in any Dominion or Dependency and in any Foreign Country or Place.
- (W) To do all such other things as may be deemed incidental or conducive to the attainment of the above objects or any of them.

It is hereby expressly declared that each Sub-Clause of this Clause shall be construed independently of the other Sub-Clauses hereof, and that none of the objects mentioned in any Sub-Clause shall be deemed to be merely subsidiary to the objects mentioned in any other Sub-Clause.

4. The liability of the Members is limited.

5. The Share Capital of the Company is £10,000 divided into 10,000 Ordinary Shares of £1 each which shall be at the disposal of the Directors who may offer, allot, grant options over or otherwise dispose of them to such persons and on such terms as they think fit.

h.

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WE, the several persons whose Names, Addresses, and Descriptions are subscribed are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of Shares in the Capital of the Company set opposite our respective names.

NAMES, ADDRESSES, AND DESCRIPTIONS OF SUBSCRIBERS.	Number of Shares taken by each Subscriber.
PAUL ALEXANDER, "Woodrisings", Shooters Way, Berkhamsted, Herts. Research Physicist.	ONE.
MALCOLM EDWARD BOSTON, 19, St. Regis, Chesterton Road, Cambridge. Research Engineer.	ONE.

DATED the 10th day of October, 1950.

WITNESS to the above Signatures:-

J.H. BARTRAM,
8, Market Hill,
Cambridge.

Solicitor.

THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

ARTICLES OF ASSOCIATION

- of -

✓ VACUUM RESEARCH LIMITED

PRELIMINARY

1. The regulations contained in Part I of Table A in the First Schedule to The Companies Act, 1948 shall not apply to the Company. The Company is a private Company and subject as hereinafter provided and except where the same are varied by or inconsistent with these presents the regulations contained in Part II of Table A in the First Schedule to The Companies Act, 1948 shall apply to the Company. Subject as aforesaid reference herein to regulations in Table A shall be construed as referring to those in Part I of Table A in the First Schedule to the Companies Act, 1948.

INTERPRETATION

2. In these regulations :-

The Board means the Board of Directors of the Company or the Directors present at a duly convened Meeting of Directors at which a quorum is present. Regulation 1 of Table A shall be modified accordingly.

BUSINESS

3. Any branch or kind of business which the Company is either expressly or by implication authorised to undertake may be undertaken by the Board at such time or times as it may consider expedient and further may be suffered by it to be in abeyance whether such branch or kind of business may have been actually commenced or not so long as the Board may consider it expedient not to commence or proceed with the same.

4. The Registered Office shall be at such place in England as the Board shall from time to time appoint.

SHARE CAPITAL

✓ 5. The share capital of the Company at the date of adoption of these presents is £10,000 divided into 10,000 Shares of £1 each.

SHARES

6. Subject to the provisions of Article 8 hereof, the unissued shares of the Company shall be at the

disposal of the Board which may allot, grant options over or otherwise dispose of them to such persons, at such times and for such consideration and upon such terms and conditions as the Board may determine, but so that no shares shall be issued at a discount except in accordance with Section 57 of the Act.

LIEN

7. The liens given by Regulation 11 of Table A shall extend to every share in the capital of the Company whether fully paid or not, and to all shares registered in the name of any person indebted or under liability to the Company, whether he shall be the sole registered holder thereof or shall be one of two or more joint holders.

ALTERATION OF CAPITAL

8. Subject to any direction to the contrary that may be given by the Company in General Meeting, all new shares created after the date of adoption of these presents shall before issue be offered to such persons as at the date of the offer are entitled to receive notice from the Company of General Meetings in proportion as nearly as circumstances admit to the amount of their then existing holdings in the Company. The offer shall be made by notice specifying the number of shares offered and limiting a time within which the offer if not accepted shall be deemed to be declined and after the expiration of that time or on receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the Directors may dispose of those shares in such manner as they think most beneficial to the Company.

GENERAL MEETINGS

9. Every notice convening a General Meeting shall comply with the provisions of Section 136(2) of The Companies Act, 1948, as to giving information to Members in regard to their right to appoint proxies, and notices of and other communications relating to any General Meeting which any Member is entitled to receive shall be sent to the Auditor for the time being of the Company.

10. Regulation 54 of Table A shall be read and construed as if the words "Meeting shall be dissolved" were substituted for the words "Members present shall be a quorum".

11. A poll may be demanded at any General Meeting by the Chairman or by any Member present in person or by proxy and entitled to vote. Regulation 58 of Table A shall be modified accordingly.

12. Subject to the provisions of the Act a Resolution in writing signed by all the Members for the time being entitled to receive notice of and attend and vote at General Meetings (or being corporations, by their duly authorised representatives) shall be as valid and effective as if the same had been passed at a General Meeting of the Company duly convened and held, and may

consist of several documents in the like form, each signed by one or more Members. Regulation 5 of Part II of Table A shall not apply.

DIRECTORS

13. Unless and until otherwise determined by the Company in General Meeting the Directors shall not be less than two nor more than five in number. Regulation 75 of Table A shall be modified accordingly.

14. Any Director who, by request, performs special services, or goes or resides abroad for any purpose of the Company shall (unless otherwise expressly resolved by the Company in General Meeting) receive such extra remuneration by way of salary, percentage of profits or otherwise as the Board may determine, which shall be charged as part of the Company's ordinary working expenses.

15. A Director shall not be required to hold any shares in the capital of the Company to qualify him for office. Regulation 77 of Table A shall not apply to the Company.

16. Each Director shall have the power to nominate (1) any other Director or (2) any person approved for that purpose by a Resolution of the Board to act as alternate Director in his place during his absence and at his discretion to remove such alternate Director and, on such appointment being made the alternate Director (except as regards the power to appoint an alternate) shall be subject in all respects to the terms and conditions existing with reference to the other Directors of the Company, and each alternate Director, while so acting, shall exercise and discharge all the functions, powers and duties of the Director he represents. An alternate Director shall ipso facto cease to be an alternate Director if his appointor ceases for any reason to be a Director provided that if any Director retires but is re-elected at the same Meeting, any appointment made by him pursuant to this Article which was in force immediately before his retirement shall remain in force as though he had not retired. Any Director acting as alternate shall have an additional vote for the Director for whom he acts as alternate.

17. All appointments and removals of an alternate Director shall be effected by instrument in writing delivered at the Registered Office of the Company and the instrument of appointment shall as nearly as circumstances will admit, be in the form or to the effect following:-

"VACUUM RESEARCH LIMITED

I
a Director of the above-named Company do

hereby appoint
of
to act as alternate Director in my place during
my absence and to exercise and discharge all
duties as a Director of the Company.

AS WITNESS my hand the
19 ."

day of

18. The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking property and uncalled capital or any part thereof and to issue debentures and other securities whether outright or as collateral security for any debt, liability or obligation of the Company or of any third party. Regulation 79 of Table A shall not apply to the Company.

19. A Director shall be capable of contracting or participating in the profits of any contract with the Company in the same manner as if he were not a Director subject to his complying with the provisions of Section 199 of the Act and notwithstanding his interest may vote thereon and be counted in the quorum of any Meeting at which he is present. Regulation 84 of Table A shall be modified accordingly.

20. The office of Director shall be vacated if the Director

- (a) ceases to be a Director by virtue of Section 182 or 185 of the Act;
- (b) becomes bankrupt or insolvent or makes any arrangement or composition with his creditors generally; or
- (c) becomes prohibited from being a Director by reason of any order made under Section 188 of the Act; or
- (d) becomes of unsound mind; or
- (e) shall for more than six months have been absent without permission of the Directors from Meetings of the Directors held during that period; or
- (f) resigns his office by notice in writing to the Company; or
- (g) is convicted of any indictable offence, not being an offence under the Road Traffic Act, 1930, or any statutory modification or re-enactment thereof.

Regulation 88 of Table A shall be modified accordingly.

21. Regulations 89 to 94 inclusive of Table A shall not apply to the Company.

PROCEEDINGS OF DIRECTORS

22. The continuing Directors may act notwith-

standing any vacancy in their body, but, if and so long as their number is reduced below the number fixed by or pursuant to Article 13 as the minimum number of Directors, the continuing Directors or Director may act for the purpose of convening a General Meeting of the Company for the consideration of a resolution appointing a Director or Directors in order to increase the number of Directors to that number at least, but for no other purpose. Regulation 100 of Table A shall not apply to the Company.

23. A Resolution in writing signed by all the Directors entitled to vote shall be as effective as a Resolution passed at a Meeting of the Directors duly convened and held, and may consist of several documents in the like form, each signed by one or more of the Directors. Regulation 106 of Table A shall not apply to the Company.

MANAGING DIRECTOR

24. The Directors may from time to time appoint one or more of their body to an executive office (including that of Managing Director, Manager, or any other salaried office) for such period and on such terms as they shall think fit, and subject to the terms of any Agreement entered into in any particular case, may revoke such appointment. Subject to the terms of any such agreement as aforesaid the appointment of a Director so appointed shall be automatically determined ipso facto if he ceases from any cause to be a Director. Regulation 107 of Table A shall not apply to the Company.

25. A Managing Director, Manager or other executive officer as aforesaid shall receive such remuneration (either by way of salary, commission, participation in profits, or otherwise howsoever, whether similar to the foregoing or not) as the Directors may determine. Regulation 108 of Table A shall not apply to the Company.

PENSIONS AND ALLOWANCES

26. The Board may grant gratuities, retiring pensions or annuities or other allowances, including allowances on death, to any person or to the widow or dependants of any person in respect of services rendered by him to the Company as Managing Director, Manager or in any other office or employment under the Company or indirectly as an officer or employee of any subsidiary company of the Company or of its holding company (if any) notwithstanding that he may be or may have been a Director of the Company and may make payments towards insurances or trusts for such purposes in respect of such persons and may include rights in respect of such pensions, annuities and allowances in the terms of engagement of any such person.

WINDING UP

27. If the Company shall be wound up the assets remaining after payment of the debts and liabilities

of the Company and the costs of the liquidation shall first be applied in repaying to the Members the amounts paid or credited as paid on the shares held by them respectively and the balance (if any) shall be distributed among the Members in proportion to the number of shares held by them respectively. Provided always that the provisions hereof shall be subject to the rights of the holders of shares (if any) issued upon special conditions.

This is a copy of the new Articles of Association which were, by Special Resolution of the Company, duly passed on the Twenty third day of December, 1957 adopted in lieu of and to the exclusion of the Articles of Association then subsisting.

M. E. BOSTON

Chairman.

Registered No. 488238

68
The Companies Acts
1948 - 1967

Company Limited by Shares

SPECIAL RESOLUTION
of
Vacuum Research Limited

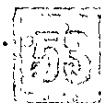
Passed 29th May 1973

At an Annual General Meeting of the above named Company, duly convened and held on 29th May 1973, the following Resolution was duly passed as a SPECIAL RESOLUTION:

RESOLUTION

That the Articles of Association of the Company be altered in manner following, namely:-

by deleting the words "not more than five" in line three of article 13.



G.H. Cookson

Chairman

Certified a true copy
VACUUM RESEARCH LIMITED



[Signature]
Secretary

69
THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

MEMORANDUM OF ASSOCIATION

- of -

VACUUM RESEARCH LIMITED

1. The name of the Company is "VACUUM RESEARCH LIMITED".
2. The Registered Office of the Company will be situate in England.
3. The objects for which the Company is established are:-
 - (A) To undertake and carry out scientific, chemical and industrial researches and investigations, and experimental work of every description, and to carry on all or any of the businesses of Analysts, Consultants, Assayers, Samplers, and Consulting and Contracting Chemical Engineers, Physicists, Vacuum Research, General Research, Analytical, and Consulting Chemists, Manufacturers, Merchants, and Factors of and Dealers in all classes of Chemicals and Chemical Products, Intermediates, Compositions, Preparations and Derivatives of all kinds, and Chemical, Industrial, Pharmaceutical, Medicinal, and other Preparations and Articles of every description, and the Products and By-Products thereof; to employ properly qualified persons to act on the Company's behalf as Consultants, Research and Analytical Chemists, or otherwise in any manner in which any persons might act if he or they were carrying on upon his or their own behalf the businesses of the Company or any of them; to carry on all or any of the businesses of Manufacturers and Agents for the Sale and Purchase of, and Dealers in Plant, Machinery, Engines, Apparatus, Patterns, Implements and Tools of every description, and to purchase or otherwise acquire and use or turn to account and generally deal in any patents or inventions in relation to any of the businesses or operations of the Company; and to buy, sell, manufacture, repair, alter, improve, manipulate, prepare for market, let on hire, and generally deal in all kinds of plant, machinery, apparatus, tools, utensils, materials, produce, substances, articles, and things for the purpose of any of the businesses specified herein, or likely to be required by customers or other persons having, or about to have, dealings with the Company.
 - (B) To carry on any other business (whether manufacturing or otherwise) which may seem to the Company capable of being conveniently carried on.

in connection with the above objects, or calculated directly or indirectly to enhance the value of or render more profitable any of the Company's property.

- (C) To purchase or by any other means acquire any freehold, leasehold, or other property for any estate or interest whatever, and any rights, privileges, or easements over or in respect of any property, and any buildings, offices, factories, mills, works, wharves, roads, railways, tramways, machinery, engines, rolling stock, vehicles, plant, live and dead stock, barges, vessels, or things, and any real or personal property or rights whatsoever which may be necessary for, or may be conveniently used with, or may enhance the value of any other property of the Company.
- (D) To build, construct, maintain, alter, enlarge, pull down, and remove or replace any buildings, offices, factories, mills, works, wharves, roads, railways, tramways, machinery, engines, walls, fences, banks, dams, sluices, or watercourses and to clear sites for the same, or to join with any person, firm, or company in doing any of the things aforesaid, and to work, manage, and control the same or join with others in so doing.
- (E) To apply for, register, purchase, or by other means acquire and protect, prolong, and renew, whether in the United Kingdom or elsewhere, any patents, patent rights, brevets d'invention, licences, trade marks, designs, protections, and concessions which may appear likely to be advantageous or useful to the Company, and to use and turn to account and to manufacture under or grant licences or privileges in respect of the same, and to expend money in experimenting upon and testing and in improving or seeking to improve any patents, inventions, or rights which the Company may acquire or propose to acquire.
- (F) To acquire and undertake the whole or any part of the business, goodwill, and assets of any person, firm, or company carrying on or proposing to carry on any of the businesses which this Company is authorised to carry on, and as part of the consideration for such acquisition to undertake all or any of the liabilities of such person, firm, or company, or to acquire an interest in, amalgamate with, or enter into partnership or into any arrangement for sharing profits, or for co-operation, or for limiting competition, or for mutual assistance with any such person, firm, or company, and to give or accept, by way of consideration for any of the acts or things aforesaid or property acquired, any Shares, Debentures, Debenture Stock, or securities that may be

agreed upon, and to hold and retain, or sell, mortgage, and deal with any shares, debentures, debenture stock, or securities so received.

- (G) To improve, manage, cultivate, develop, exchange, let on lease or otherwise, mortgage, charge, sell, dispose of, turn to account, grant rights and privileges in respect of, or otherwise deal with all or any part of the property and rights of the Company.
- (H) To invest and deal with the moneys of the Company not immediately required in such shares or upon such securities and in such manner as may from time to time be determined.
- (I) To lend and advance money or give credit to such persons, firms, or companies and on such terms as may seem expedient, and in particular to customers of and others having dealings with the Company, and to give guarantees or become security for any such persons, firms, or companies.
- (J) To borrow or raise money in such manner as the Company shall think fit, and in particular by the issue of Debentures or Debenture Stock (perpetual or otherwise) and to secure the repayment of any money borrowed, raised, or owing, by mortgage, charge, or lien upon the whole or any part of the Company's property or assets (whether present or future), including its uncalled Capital, and also by a similar mortgage, charge, or lien to secure and guarantee the performance by the Company of any obligation or liability it may undertake.
- (K) To draw, make, accept, endorse, discount, execute, and issue promissory notes, bills of exchange, bills of lading, warrants, debentures, and other negotiable or transferable instruments.
- (L) To apply for, promote, and obtain any Act of Parliament, Provisional Order, or Licence of the Board of Trade or other authority for enabling the Company to carry any of its objects into effect, or for effecting any modification of the Company's constitution, or for any other purpose which may seem expedient, and to oppose any proceedings or applications which may seem calculated directly or indirectly to prejudice the Company's interests.
- (M) To enter into any arrangements with any Governments or authorities (supreme, municipal, local, or otherwise), or any companies, firms, or persons that may seem conducive to the attainment of the Company's objects or any of them, and to obtain from any such Government, authority, company, firm, or person any charters, contracts, decrees, rights, privileges, and concessions which the Company may think desirable, and to carry out, exercise, and comply with any such charters, contracts, decrees, rights, privileges, and concessions.
- (N) To subscribe for, take, purchase, or otherwise acquire and hold shares or other interests in or

securities of any other company having objects altogether or in part similar to those of this Company or carrying on any business capable of being carried on so as directly or indirectly to benefit this Company.

(O) To act as agents or brokers and as trustees for any person, firm, or company, and to undertake and perform sub-contracts, and also to act in any of the businesses of the Company through or by means of agents, brokers, sub-contractors, or others.

(P) To remunerate any person, firm, or company rendering services to this Company, either by cash payment or by the allotment to him or them of Shares or securities of the Company credited as paid up in full or in part or otherwise as may be thought expedient.

(Q) To pay all or any expenses incurred in connection with the promotion, formation, and incorporation of the Company, or to contract with any person, firm, or company to pay the same, and to pay commissions to brokers and others for underwriting, placing, selling, or guaranteeing the subscription of any Shares, Debentures, Debenture Stock, or securities of this Company.

(R) To support and subscribe to any charitable or public object, and any institution, society, or club which may be for the benefit of the Company or its employes, or may be connected with any town or place where the Company carries on business; to give or award pensions, annuities, gratuities, and superannuation or other allowances or benefits or charitable aid to any persons who are or have been Directors of, or who are or have been employed by, or who are serving or have served the Company, and to their wives, widows, children, and other relatives and dependants of such persons; to make payments towards insurance; and to set up, establish, support, and maintain superannuation and other funds or schemes (whether contributory or non-contributory) for the benefit of any of such persons and of their wives, widows, children, and other relatives and dependants.

(S) To promote any other company for the purpose of acquiring the whole or any part of the business or property and undertaking any of the liabilities of this Company, or of undertaking any business or operations which may appear likely to assist or benefit this Company or to enhance the value of any property or business of this Company, and to place or guarantee the placing of, underwrite, subscribe for, or otherwise acquire all or any part of the shares or securities of any such company as aforesaid.

(T) To sell or otherwise dispose of the whole or any part of the business or property of the

Company, either together or in proportions, for such consideration as the Company may think fit, and in particular for shares, debentures, or securities of any company purchasing the same.

- (U) To distribute among the Members of the Company in kind any property of the Company, and in particular any shares, debentures, or securities of other companies belonging to this Company or of which this Company may have the power of disposing,
- (V) To procure the Company to be registered or recognised in any Dominion or Dependency and in any Foreign Country or Place.
- (W) To do all such other things as may be deemed incidental or conducive to the attainment of the above objects or any of them.

It is hereby expressly declared that each Sub-Clause of this Clause shall be construed independently of the other Sub-Clauses hereof, and that none of the objects mentioned in any Sub-Clause shall be deemed to be merely subsidiary to the objects mentioned in any other Sub-Clause.

4. The liability of the Members is limited.

5. The Share Capital of the Company is £10,000 divided into 10,000 Ordinary Shares of £1 each which shall be at the disposal of the Directors who may offer, allot, grant options over or otherwise dispose of them to such persons and on such terms as they think fit.

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WE, the several persons whose Names, Addresses, and Descriptions are subscribed are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of Shares in the Capital of the Company set opposite our respective names.

NAMES, ADDRESSES, AND DESCRIPTIONS OF SUBSCRIBERS.	Number of Shares taken by each Subscriber.
PAUL ALEXANDER, "Woodrings", Shooters Way, Berkhamsted, Herts. Research Physicist.	ONE.
MALCOLM EDWARD BOSTON, 19, St. Regis, Chesterton Road, Cambridge. Research Engineer.	ONE.

DATED the 10th day of October, 1950.

WITNESS to the above Signatures:-

J.H. BARTRAM,
8, Market Hill,
Cambridge.

Solicitor.

Still in draft

THE COMPANIES ACT, 1948.

COMPANY LIMITED BY SHARES.

ARTICLES OF ASSOCIATION

- of -

VACUUM RESEARCH LIMITED

PRELIMINARY

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INTERPRETATION

2. In these regulations :-

The Board means the Board of Directors of the Company or the Directors present at a duly convened Meeting of Directors at which a quorum is present. Regulation 1 of Table A shall be modified accordingly.

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3. Any branch or kind of business which the Company is either expressly or by implication authorised to undertake may be undertaken by the Board at such time or times as it may consider expedient and further may be suffered by it to be in abeyance whether such branch or kind of business may have been actually commenced or not, so long as the Board may consider it expedient not to commence or proceed with the same.

4. The Registered Office shall be at such place in England as the Board shall from time to time appoint.

SHARE CAPITAL

5. The share capital of the Company at the date of adoption of these presents is £10,000 divided into 10,000 Shares of £1 each.

SHARES

6. Subject to the provisions of Article 8 hereof, the unissued shares of the Company shall be at the

disposal of the Board which may allot, grant options over or otherwise dispose of them to such persons, at such times and for such consideration and upon such terms and conditions as the Board may determine, but so that no shares shall be issued at a discount except in accordance with Section 57 of the Act.

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consist of several documents in the like form, each signed by one or more Members. Regulation 5 of Part II of Table A shall not apply.

DIRECTORS

13. Unless and until otherwise determined by the Company in General Meeting the Directors shall not be less than two in number. Regulation 75 of Table A shall be modified accordingly.

14. Any Director who, by request, performs special services, or goes or resides abroad for any purpose of the Company shall (unless otherwise expressly resolved by the Company in General Meeting) receive such extra remuneration by way of salary, percentage of profits or otherwise as the Board may determine, which shall be charged as part of the Company's ordinary working expenses.

15. A Director shall not be required to hold any shares in the capital of the Company to qualify him for office. Regulation 77 of Table A shall not apply to the Company.

16. Each Director shall have the power to nominate (1) any other Director or (2) any person approved for that purpose by a Resolution of the Board to act as alternate Director in his place during his absence and at his discretion to remove such alternate Director and, on such appointment being made the alternate Director (except as regards the power to appoint an alternate) shall be subject in all respects to the terms and conditions existing with reference to the other Directors of the Company, and each alternate Director, while so acting, shall exercise and discharge all the functions, powers and duties of the Director he represents. An alternate Director shall ipso facto cease to be an alternate Director if his appointor ceases for any reason to be a Director provided that if any Director retires but is re-elected at the same Meeting, any appointment made by him pursuant to this Article which was in force immediately before his retirement shall remain in force as though he had not retired. Any Director acting as alternate shall have an additional vote for the Director for whom he acts as alternate.

17. All appointments and removals of an alternate Director shall be effected by instrument in writing delivered at the Registered Office of the Company and the instrument of appointment shall as nearly as circumstances will admit, be in the form or to the effect following:-

"VACUUM RESEARCH LIMITED

I
a Director of the above-named Company do

hereby appoint
of
to act as alternate Director in my place during
my absence and to exercise and discharge all
duties as a Director of the Company.

AS WITNESS my hand the day of
19 ."

18. The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking property and uncalled capital or any part thereof and to issue debentures and other securities whether outright or as collateral security for any debt, liability or obligation of the Company or of any third party. Regulation 79 of Table A shall not apply to the Company.

19. A Director shall be capable of contracting or participating in the profits of any contract with the Company in the same manner as if he were not a Director subject to his complying with the provisions of Section 199 of the Act and notwithstanding his interest may vote thereon and be counted in the quorum of any Meeting at which he is present. Regulation 84 of Table A shall be modified accordingly.

20. The office of Director shall be vacated if the Director

- (a) ceases to be a Director by virtue of Section 182 or 185 of the Act;
- (b) becomes bankrupt or insolvent or makes any arrangement or composition with his creditors generally; or
- (c) becomes prohibited from being a Director by reason of any order made under Section 188 of the Act; or
- (d) becomes of unsound mind; or
- (e) shall for more than six months have been absent without permission of the Directors from Meetings of the Directors held during that period; or
- (f) resigns his office by notice in writing to the Company; or
- (g) is convicted of any indictable offence, not being an offence under the Road Traffic Act, 1930, or any statutory modification or re-enactment thereof.

Regulation 88 of Table A shall be modified accordingly.

21. Regulations 89 to 94 inclusive of Table A shall not apply to the Company.

PROCEEDINGS OF DIRECTORS

22. The continuing Directors may act notwith-

standing any vacancy in their body, but, if and so long as their number is reduced below the number fixed by or pursuant to Article 13 as the minimum number of Directors, the continuing Directors or Director may act for the purpose of convening a General Meeting of the Company for the consideration of a resolution appointing a Director or Directors in order to increase the number of Directors to that number at least, but for no other purpose. Regulation 100 of Table A shall not apply to the Company.

23. A Resolution in writing signed by all the Directors entitled to vote shall be as effective as a Resolution passed at a Meeting of the Directors duly convened and held, and may consist of several documents in the like form, each signed by one or more of the Directors. Regulation 106 of Table A shall not apply to the Company.

MANAGING DIRECTOR

24. The Directors may from time to time appoint one or more of their body to an executive office (including that of Managing Director, Manager, or any other salaried office) for such period and on such terms as they shall think fit, and subject to the terms of any Agreement entered into in any particular case, may revoke such appointment. Subject to the terms of any such agreement as aforesaid the appointment of a Director so appointed shall be automatically determined ipso facto if he ceases from any cause to be a Director. Regulation 107 of Table A shall not apply to the Company.

25. A Managing Director, Manager or other executive officer as aforesaid shall receive such remuneration (either by way of salary, commission, participation in profits, or otherwise howsoever, whether similar to the foregoing or not) as the Directors may determine. Regulation 108 of Table A shall not apply to the Company.

PENSIONS AND ALLOWANCES

26. The Board may grant gratuities, retiring pensions or annuities or other allowances, including allowances on death, to any person or to the widow or dependants of any person in respect of services rendered by him to the Company as Managing Director, Manager or in any other office or employment under the Company or indirectly as an officer or employee of any subsidiary company of the Company or of its holding company (if any) notwithstanding that he may be or may have been a Director of the Company and may make payments towards insurances or trusts for such purposes in respect of such persons and may include rights in respect of such pensions, annuities and allowances in the terms of engagement of any such person.

WINDING UP

27. If the Company shall be wound up the assets remaining after payment of the debts and liabilities

of the Company and the costs of the liquidation shall first be applied in repaying to the Members the amounts paid or credited as paid on the shares held by them respectively and the balance (if any) shall be distributed among the Members in proportion to the number of shares held by them respectively. Provided always that the provisions hereof shall be subject to the rights of the holders of shares (if any) issued upon special conditions.

This is a copy of the new Articles of Association which were, by Special Resolution of the Company, duly passed on the Twenty third day of December, 1957 adopted in lieu of and to the exclusion of the Articles of Association then subsisting.

M. E. BOSTON

Chairman.

No. 488238

THE COMPANIES ACTS 1948, 1976

COMPANY LIMITED BY SHARES

SPECIAL RESOLUTION
OF
VACUUM RESEARCH LIMITED

Passed on the 24th day of February 1978

At an EXTRAORDINARY GENERAL MEETING of the above-named company duly convened and held at Burrell Way, Thetford, Norfolk, IP24 3QY on Friday, the 24th day of February 1978 the following resolution was duly passed as a SPECIAL RESOLUTION:-

RESOLUTION

THAT:-

The name of the company be changed to CAMVAC LIMITED

G.H. Cookson

G.H. COOKSON
Chairman

Bardays
003758





CERTIFICATE OF INCORPORATION
ON CHANGE OF NAME

No. 488238

80

I hereby certify that

VACUUM RESEARCH LIMITED

having by special resolution and with the approval of the Secretary of State changed
its name, is now incorporated under the name of

CANVAC LIMITED

Given under my hand at Cardiff the **30TH MARCH 1978**

Assistant Registrar of Companies

THE COMPANIES ACTS 1948 TO 1976

Notice of place where copies of
directors' service contracts or
memorandums thereof are kept
or of any change in that place

Pursuant to section 26 (3) of the Companies Act 1967
as amended by the Companies Act 1976

26

Please do not
write in this
binding margin

Please complete
legibly,
preferably in
black type, or
bold black
lettering

*Delete if
inappropriate

To the Registrar of Companies

Company number

For official use

468238

086

Name of company

CAMUAC

Limited*

hereby gives you notice, in accordance with section 26 (3) of the Companies Act 1967 as amended by the Companies Act 1976, that such copies of the directors' service contracts, or where they are not in writing such written memorandums setting out the terms of those contracts, as are required to be kept by the company and to be open to the inspection of the members of the company, are kept at:

PORTLAND HOUSE

STAG PLACE

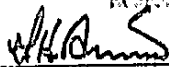
LONDON SW1E 5DJ

B-M Secretariat Limited

Registered

†Delete as
appropriate

Signed



[Director] [Secretary]†

Date 11th February 1980

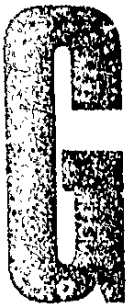
Presenter's name, address and
reference (if any):

THE COMPANY

For official use
General section

Post room

80 125 15.



THE COMPANIES ACTS 1948 TO 1976

Notice of place where register of directors' interests in shares etc. is kept of any change in that place

Pursuant to section 29(8) of the Companies Act 1967
 as amended by the Companies Act 1976

27

Please do not
 write in this
 binding margin

Please complete
 legibly, preferably
 in black type, or
 bold black lettering

To the Registrar of Companies

Company number

For official use

445238

0 8 7

Name of company

*delete if
 inappropriate

CAMVAC

Limited*

hereby gives you notice, in accordance with section 29(8) of the Companies Act 1967 as amended by the Companies Act 1976, that the register of directors' interests in shares in, or debentures of, the company or any other body corporate, being the company's subsidiary or holding company or a subsidiary of the company's holding company, is kept at:

BOWATER HOUSE

KNIGHTS BRIDGE

LONDON SW1X 7LR

†delete as
 appropriate

Signed

[Signature]

[Director] [Secretary] † Date 11th February 1980

Presentor's name, address and
 reference: (if any)

THE COMPANY

For official use
 General section

Postroom

12

No: 488238

THE COMPANIES ACTS 1948 to 1976

COMPANY LIMITED BY SHARES

RESOLUTION

OF

CANVAC LIMITED

AT AN EXTRAORDINARY GENERAL MEETING of the Company held on
7th February 1980, the following Resolution was duly passed
as a Special Resolution:-

SPECIAL RESOLUTION

THAT the regulations contained in the printed document of
which a copy has been produced to this meeting signed for
the purpose of identification by the Chairman thereof be
hereby adopted as the Articles of Association of the Company
in substitution for and to the exclusion of all the
existing Articles thereof.



Chairman of the Meeting

NO. 488238

THE COMPANIES ACTS, 1948 to 1976 -- Company Limited by Shares

ARTICLES OF ASSOCIATION of CAMVAC LIMITED
(adopted by Special Resolution passed on 7th February, 1980)

I. GENERAL

1. Subject as hereinafter provided the regulations contained in Table A, Parts I and II, in the First Schedule to the Companies Act 1948 (hereinafter called "Table A") shall apply to the Company.

2. The Company shall be a private Company and regulations 24 and 53 of Part I of Table A shall not apply.

II. SHARES

3. All unissued shares of the Company shall be under the control of the Directors, who may allot, grant options over or otherwise dispose of them to such persons at such times for such consideration and upon such terms and conditions as the Directors may determine.

III. LIEN

4. The Company's lien on shares shall extend to all shares including fully paid up shares and regulation 11 of Part I of Table A shall be construed accordingly.

IV. PROXIES

5. The instrument appointing a proxy and the Power of Attorney or other authority, if any, under which it is signed, or a notarially certified copy of that power or authority, shall be produced at any meeting at which the person named in the instrument wishes to vote by that person before he votes and in default of such production any vote cast by that person shall not be counted.

Regulation 69 of Part I of Table A shall not apply.

V. DIRECTORS

6. The number of Directors shall not be less than two and regulation 75 of Part I of Table A shall be construed accordingly.

7. The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking, property and uncalled capital, or any part thereof and to issue debenture stock and other securities, whether outright or as security for any debt, liability or obligation of the Company or any third party.

Regulation 79 of Part I of Table A shall not apply.

8. A Director may vote as a Director in respect of any contract or arrangement which he shall make with the Company or in which he is directly or indirectly interested, and if he does so vote his vote shall be counted and he shall be reckoned for the purpose of constituting a quorum of the Directors at the meeting.

b

9. Any Director who, by request, performs special services or goes or resides abroad for any purposes of the Company may be paid such extra remuneration as the Directors may determine.

10. Regulation 86 shall be modified so that a Director present at any meeting of the Directors or Committee of the Directors shall not be required to sign his name in a book kept for that purpose.

11. If, and for so long as, a majority of the issued ordinary share capital for the time being of the Company is beneficially owned by another body corporate, the Directors of the Company or any of them may be appointed and removed by written notice served on the Company by the beneficial owner for the time being of such amount of the issued ordinary share capital of the Company.

Regulation 84(2) and 84(4) and regulations 89 to 94 inclusive shall not apply, and regulation 95 shall be construed accordingly.

12. The Directors may from time to time provide for the management and transaction of the affairs of the Company in any specified locality, whether in the United Kingdom or overseas, in such manner in all respects as they think fit.

VI. ALTERNATE DIRECTORS

13. Any Director may, by writing under his hand, appoint any person (whether as Director or Member of the Company or not) to be his alternate, and such alternate shall be entitled in the absence of the Director whom he represents to attend and vote at meetings of the Directors, but the appointment of a person who is not a Director must be approved by at least two-thirds of the Directors before becoming effective. A Director may at any time, by notice in writing to the Secretary left at the registered office of the Company, revoke the appointment of his alternate and appoint another person in his place and if a Director dies or ceases to hold the office of Director the appointment of his alternate shall thereupon determine.

14. Every person acting as an alternate Director shall be an officer of the Company, but shall not be deemed to be an agent of the Director whom he represents. The remuneration of any alternate Director shall be such proportion of the remuneration payable to the Director appointing him as he and that Director shall agree.

15. Where a Director has given to the Secretary notice of his absence from the United Kingdom and is represented by an alternate Director, due notice of any meeting of the Directors shall be given to such alternate Director, but an alternate Director shall not otherwise be entitled to receive notice of meetings of the Directors.

16. A Director who is also an alternate Director shall be entitled to a separate vote on behalf of the Director he is representing in addition to his own vote.

VII. PROCEEDINGS OF DIRECTORS

17. Regulation 106 shall not apply. A resolution in writing either signed or approved by letter, telex or telegram by all the Directors for the time being entitled to receive notice of a meeting of the Directors shall be as valid and effectual as if it had been passed at a meeting of the Directors duly convened and held, and when signed may consist of several documents each signed by one or more of such Directors.

VIII. SEAL

18. The Company may exercise the power conferred by Section 35 of the Companies Act 1948, with regard to having an Official Seal for use abroad, and such powers shall be vested in the Directors.

IX. INDEMNITY

19. Subject to the provisions of the Companies Acts, every Director, Auditor, Secretary or other officer of the Company shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him in the execution and discharge of his duties or in relation thereof.

Regulation 136 shall be extended accordingly.

This is a copy of the new Articles of Association which were, by Special Resolution of the Company, duly passed on the Seventh day of February, 1980 adopted in lieu of and to the exclusion of the existing Articles of Association.



Chairman

No of Company 488238 *RA*

Form No. 103

(No registration
fee payable)

THE COMPANIES ACTS 1948 TO 1967

Notice of place where register of members is kept or
of any change in that place
Pursuant to Section 110(3) of the Companies Act 1948

To the Registrar of Companies

Name of Company CAMVAC Limited

hereby gives you notice, in accordance with subsection (3) of Section 110 of the Companies Act 1948

that the register of members of the company is kept at

CALM BANK HOUSEGRAVESENDKENT DA 11 GAO

*Delete "Limited" if not applicable

By Secretary *RA*

Signed

State whether

Director or Secretary

Date

11th February 1980

Margin reserved for binding

Presented by: THE COMPANY

Presentor's reference:



Peat, Marwick, Mitchell & Co.

488234
95

1 Puddle Dock
Blackfriars, London, EC4V 3PD
Telephone: 01 - 236 8000
Telex: 888018
Telegrams: VERITATEM LONDON ECA

Our Ref. FBH/AMB/MS

Your Ref.

1st May, 1980.

T.H. Aucott, Esq.,
Assistant Secretary,
The Bowater Corporation Limited,
Bowater House,
Knightsbridge,
London.
SW1X 7LR

Dear Sir,

Camvac Limited

Thank you for your letter of 29th April, 1980 to Mr. Harvey.

We confirm our resignation forthwith as auditors of the above company.

We also confirm in accordance with Section 16 Companies Act, 1976 that there are no circumstances in connection with our resignation which we consider should be brought to the notice of the members or the creditors of the above company.

Yours faithfully,

Peat, Marwick, Mitchell & Co.



J. P. Grenside, C.B.E.
H. Peat, C.V.O.
D. G. E. Benzie
W. B. S. Walker
O. C. Peat
A. W. Howitt
J. K. Mather
O. W. Dunkerley
O. H. Thompson

P. J. Butler
K. Exley
A. J. Hardcastle
T. W. Allen
C. N. Smith, C.B.E.
G. T. E. Parsons
R. J. P. Weaver
J. B. Barton
M. Renshall, O.B.E.

G. A. Milnes
I. D. Watson
N. C. England
J. White
D. W. J. Young
R. V. J. Chadder
D. B. Vaughan
D. F. Mead
D. E. A. Morris
T. F. L. Webber

R. J. G. White
W. D. A. Carter
W. F. Ratford
W. M. T. Fowle
R. W. Whewell
R. B. Allan
E. Brinham
R. D. Agutter
C. T. E. Hayward
J. M. Ross

B. J. Clow
S. H. Ingall
R. L. Spalding
C. M. Thompson
P. W. Triggs
G. M. C. Carter
J. R. Doan
M. E. S. Gibbins
G. Acher
A. Comber

G. D. H. Dewar
D. B. Ward
P. G. Corbett
J. R. Adcock
G. D. Bowie
R. Leng-Smith
C. G. Sneath
P. C. Westwood
A. J. Kerevan
B. C. Pike

488233.1
96.



Peat, Marwick, Mitchell & Co.

1 Puddle Dock
Blackfriars, London, EC4V 3PD
Telephone: 01 - 236 8000
Telex: 888018
Telegrams: VERITATEM LONDON EC4

Our Ref. FBH/AMB/MS

Your Ref.

T.H. Aucott, Esq.,
Assistant Secretary,
The Bowater Corporation Limited,
Bowater House,
Knightsbridge,
London.
SW1X 7LR

1st May, 1980.

Dear Sir,

Camvac Limited

Thank you for your letter of 29th April, 1980 to Mr. Harvey.

We confirm our resignation forthwith as auditors of the above company.

We also confirm in accordance with Section 16 Companies Act, 1976 that there are no circumstances in connection with our resignation which we consider should be brought to the notice of the members or the creditors of the above company.

Yours faithfully,

Peat, Marwick, Mitchell & Co.



J. P. Grenside, C.B.E.
H. Peat, C.V.O.
D. G. E. Benzie
W. B. S. Walker
G. C. Peat
A. W. Howitt
J. K. Mather
G. W. Duakerley
O. H. Thomas

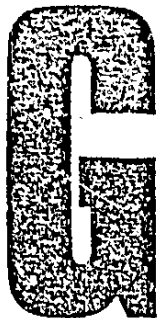
P. J. Butler
K. Exley
A. J. Hardcastle
T. W. Allen
C. N. Smith, C.B.E.
G. T. E. Parsons
R. J. P. Weaver
J. B. Barton
M. Renhall, O.B.E.

G. A. Milnes
I. D. Watson
N. C. England
J. White
D. W. J. Young
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J. R. Adcock
G. D. Bowie
R. Leng-Smith
C. O. Sneath
P. C. Westwood
A. J. Kerevan
B. C. Pike



THE COMPANIES ACTS 1948 TO 1976

Notice of place where register of members is kept or of any change in that place

Pursuant to section 110(3) of the Companies Act 1948 as amended by the Companies Act 1976

103

Please do not write in this binding margin

Please complete legibly, preferably in black type, or bold block lettering

*delete if inappropriate

To the Registrar of Companies

For official use

Company number

108

488238

Name of company

CAMVAC

Limited*

hereby gives you notice in accordance with section 110(3) of the Companies Act 1948 that the register of members is now kept at:

BOWATER HOUSE, KNIGHTSBRIDGE,
LONDON SW1X 7LR

in lieu of*

CALLYBANK HOUSE, GRAVESEND,
KENT DA11 9AQ

where it was previously kept

B-R Secretariat Limited

Secretaries

By *Wm Waller* (Director)

Signed

[Director][Secretary]† Date 11/11/83

†delete as appropriate

Presenter's name, address and reference (if any):

For official use
General Section

Post room



The London Law Agency Limited

TEMPLE CHAMBERS, TEMPLE AVENUE, LONDON, EC4Y 0HP

Company Registration Agents, Printers and Publishers

Tel: 01-353 9471 (10 lines)



Company No. 488238

THE COMPANIES ACT 1985

COMPANY LIMITED BY SHARES

SPECIAL RESOLUTION

OF CAMVAC LIMITED

Passed the 3rd January 1989

We, the undersigned, being all the members for the time being of the above-named Company entitled to receive notice and to attend and vote at general meetings hereby pass the following resolution as a SPECIAL RESOLUTION and agree that the said resolution shall for all purposes be as valid and effective as if the same had been passed at a General Meeting of the company duly convened and held:

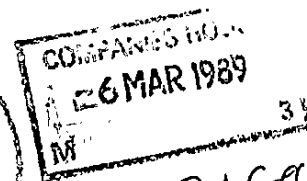
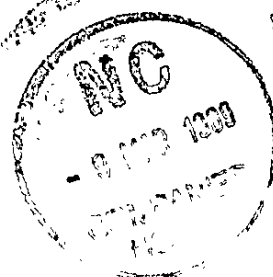
SPECIAL RESOLUTION

CHANGE
OF NAME

THAT the name of the Company be changed to
CAMVAC (EUROPE) LIMITED

Signed FOR AND ON BEHALF OF LTD
EDINBURGH GATE HOLDINGS LTD
[Signature] DIRECTOR
FOR AND ON BEHALF OF (Members)
BERKELEY NOMINEES LTD

[Signature]
DIRECTOR



BB160
07686

FILE COPY



**CERTIFICATE OF INCORPORATION
ON CHANGE OF NAME**

No. 488238

I hereby certify that

CAMVAC LIMITED

having by special resolution changed its name,
is now incorporated under the name of

CAMVAC (EUROPE) LIMITED

Given under my hand at the Companies Registration Office,
Cardiff the 16 MARCH 1989

A handwritten signature in dark ink, appearing to read 'D. James'.

D. JAMES

an authorised officer

MINUTES OF THE ANNUAL GENERAL MEETING OF
CAMVAC (EUROPE) LTD

HELD AT Burrell Way, Thetford, Norfolk, IP24 3QY

ON 23 May 1990 at 2.00 pm

PRESENT David Lester Julian Crawley (In the Chair)

Iain Mitchell McLeod
representing Berkeley Nominees Ltd

Rodger Sidney Arthur Kelly
representing Edinburgh Gate Holdings Ltd

James Portland Robinson

Myle Stott

David Keith Thompson

Leonard Robert Anthony Stock

Wayham Hutcheson Moran

REPORT
AND
ACCOUNTS

IT WAS RESOLVED

THAT the report of the directors and the audited accounts for the year ended 31 December 1989 together with the Auditors' report thereon now submitted to this meeting be and are hereby received.

APPOINTMENT
OF DIRECTORS

IT WAS RESOLVED

THAT the following directors appointed on the dates given below be and are hereby re-elected directors of the Company.

James Portland Robinson, 2 October 1989

Myle Stott, 1 January 1990

David Keith Thompson, 17 January 1990

Leonard Robert Anthony Stock, 1 January 1990

David Lester Julian Crawley, 21 February 1990

Wayham Hutcheson Moran, 21 March 1990

AUDITORS

IT WAS RESOLVED

That the Company make itself exempt from the obligation to appoint auditors as otherwise required by Section 384 of the Companies Act 1985 in that it is a dormant company and meets all requirements of Section 282 of the aforesaid Act in this respect.

There being no further business the meeting was closed.

Chairman

CERTIFIED COPY *SK Thompson*
COMPANIES HOUSE
10 JUL 1990
Company Secretary
M 8

29 - 03 - 95

FILE COPY



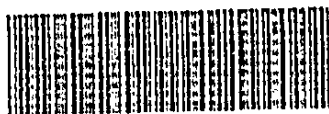
CERTIFICATE OF INCORPORATION ON CHANGE OF NAME

Company No. 488238

The Registrar of Companies for England and Wales hereby certifies that
CAMVAC (EUROPE) LIMITED

having by special resolution changed its name, is now incorporated
under the name of
CAMVAC EUROPE LIMITED

Given at Companies House, Cardiff, the 29th March 1995



C004882389

P. A. Morgan

P.A.MORGAN (MRS)

For the Registrar of Companies

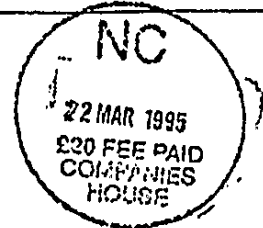


C O M P A N I E S H O U S E

HC006B

29 - 03 - 95

29/3/95



COMPANY NO: 488238

THE COMPANIES ACT 1985

COMPANY LIMITED BY SHARES

RESOLUTION of the Members

of Camvac (Europe) Limited

passed 20 MARCH 1995

At the Extraordinary General Meeting of the members of the above named Company duly convened and held at Saffron Ground, Ditchmore Lane, Stevenage, Hertfordshire, SG1 3LD on 20 MARCH 1995, the following SPECIAL RESOLUTION was duly passed:

SPECIAL RESOLUTION

THAT the name of the company be changed to

" CANVAC EUROPE LIMITED "

Chairman 

namechange.pac

