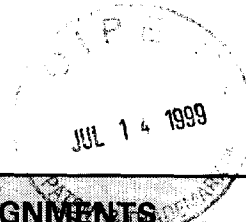


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To the Honorable Commissioner of Patents and Trademarks:
Please record the attached original documents or copies thereof.

1. Name(s) of Conveying Party(ies):

Alfred Rick, Josef Hoffmann and Klaus Michael

2. Name(s) and Address(es) of Receiving Party(ies):

Leybold Systems GmbH, Wilhelm-Rohn-Strasse 25, D-63450 Hanau, Fed. Rep. of Germany

3. Nature of Conveyance:

Assignment

Execution Date: 5/18/99

4A. Patent Application No.(s): 09/302,491

Application Execution Date: 5/18/99 ,
5/5/99 and 5/10/99

4B. Patent No.(s):

5. Name and Address of Party to Whom Correspondence Regarding This Document Should Be Mailed:

Smith, Gambrell & Russell, LLP, Beveridge, DeGrandi, Weilacher & Young,
Intellectual Property Group
Suite 800, 1850 M Street N.W., Washington, D.C. 20036
(202) 659-2811

Attorney Docket No.: 32653W011

6. Total Number of Applications and Patents involved:

1

7. Total Fee:

\$40.00

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8. Deposit Account No.: 02-4300

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9. Statement and Signature: To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document.

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July 14, 1999
Date

Total Number of Pages (including cover sheet): 4

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03 FEB 91

A S S I G N M E N T

WHEREAS the undersigned (hereinafter "ASSIGNOR") have invented certain new and useful improvements in

VACUUM TREATMENT SYSTEM FOR APPLICATION OF THIN, HARD LAYERS for which an application for United States Letters Patent was executed concurrently herewith unless otherwise indicated and claims the benefit of German priority application 198 19 726.8 filed May 2, 1998

WHEREAS, LEYBOLD SYSTEMS GmbH
Wilhelm-Rohn-Strasse 25
D-63450 Hanau, Federal Republic of Germany

a German Corporation (hereinafter "ASSIGNEE") is desirous of acquiring the entire right, title and interest in the same:

NOW, THEREFORE, in view of good and valuable consideration, the said ASSIGNOR hereby sells, assigns and transfers unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and all other countries and the entire right, title and interest in and to any and all Letters Patent, which may be granted therefore in the United States, and all other countries and in and to any and all divisions, reissues, continuations, and extensions thereof.

Said ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said

ASSIGNEE, as the assignee of the entire right, title and interest in and to the same, for the sole use and for the use of its successors, legal representatives, and assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by said ASSIGNOR had this assignment and sale not been made.

Further, the ASSIGNOR agrees to communicate to said ASSIGNEE, or its representatives, any facts known to the ASSIGNOR respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR authorizes any attorneys and agents who have a power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

IN TESTIMONY WHEREOF, we have hereunto set our hands

Signatures

Dates
Hanau, May 18, 1999

In the Presence of:

Hildegard Geberth
(Hildegard Geberth)

Alfred Rick

Alfred Rick

Josef Hoffmann

Josef Hoffmann

Klaus Michael

Klaus Michael