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(71) Applicant (for all designated States except US): **STICHTING VOOR DE TECHNISCHE WETENSCHAPPEN** [NL/NL]; Van Vollenhovenlaan 661, NL-3527 JP Wageningen (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NIJDAM, Thijs Joost** [NL/NL]; Prof. Evertslaan 12, NL-2628 XX Delft (NL). **JEURGENS, Lars Petrus Henricus** [NL/DE]; Fuchswaldstrasse 79A, 70569 Stuttgart (DE). **SLOOF, Willem Gerrit** [NL/NL]; Guineeleen 26, NL-2622 DJ Delft (NL).

(74) Agent: **VAN WESTENBRUGGE, Andries**; Nederlandsch Octrooibureau, Postbus 29720, NL-2502 LS Den Haag (NL).

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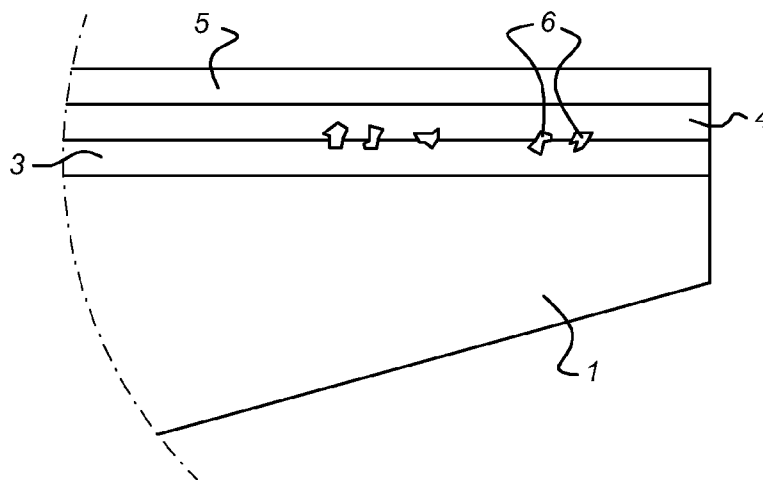
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(54) Title: METHOD FOR PROVIDING A THERMAL BARRIER COATING AND SUBSTRATE HAVING SUCH COATING



(57) Abstract: Method for providing a thermal barrier coating and substrate. The thermal barrier coating (5) is provided on a thermally grown oxide (4) which is grown on a metallic bond coating (3) provided on said substrate (1). Adhesion between the bond coating (3) and thermally grown oxide coating (4) is improved by providing projections at the interface of yttriaalumina garnet (4) compounds. Service life at relatively high temperature of the thermally grown oxide coating (4) is improved by having alumina grain (6) with relatively large size. These are obtained by pre-annealing the bond coating (3) in an inert gas atmosphere followed by controlled preoxidation.

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# INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

INV. C23C30/00 C23C28/00 C23C8/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                | Relevant to claim No. |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A         | EP 0 567 252 A (GENERAL ELECTRIC COMPANY)<br>27 October 1993 (1993-10-27)<br>column 4, line 10 - column 5, line 7;<br>figures 2,3 | 1-11                  |
| A         | US 2003/041928 A1 (SPITSBERG IRENE ET AL)<br>6 March 2003 (2003-03-06)<br>paragraphs [0032] - [0034], [0036]; claim<br>16         | 1-11                  |
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|           | -----<br>-/--                                                                                                                     |                       |

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☒ See patent family annex.

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European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Teppo, Kirsi-Marja

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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| A         | US 6 455 167 B1 (RIGNEY JOSEPH D ET AL)<br>24 September 2002 (2002-09-24)<br>column 6, line 24 - column 7, line 18;<br>figures 7,9; example 3<br>----- | 1-11                  |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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| Patent document<br>cited in search report |    | Publication<br>date | Patent family<br>member(s)                     | Publication<br>date                    |
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