Title: METHOD FOR PROCESSING MATERIALS TO INCREASE SLURRY LIFETIME

Abstract: Methods for increasing the lifetime of a casting slurry are described. One feature of the invention is processing refractory powders at a first hydration level to produce powders having a second, lower hydration level before the processed materials are used to form casting slurries. Processing according to the disclosed methods results in a substantial increase in the lifetime of a slurry made using such processed materials compared to slurries made using materials not processed as described herein. One embodiment of the method comprises heat processing at least one refractory powder, typically refractory powders which have undergone hydration subsequent to commercial production, for a period of time sufficient to reduce the amount of hydration from a first hydration level to a second hydration level. A slurry is formed using the refractory powder at an hydration level which provides an increased slurry lifetime relative to the same material without processing according to the method of the present invention. Slurry formation can be accomplished substantially immediately after processing, or up to about one week after processing, typically less than 24 hours after processing, and even more typically within 2 hours to about 8 hours after processing.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : B22C 1/02, 9/00, 1/22
US CL : 164/519, 529
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)
U.S. : 164/519, 529

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,624,604 (Yasrebi et al.) 29 April 1997 (29.04.1997), column 6, lines 52-67; column 7, lines 1-17</td>
<td>1, 2</td>
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<td>Y</td>
<td>US 4,947,927 (Horton) 14 August 1990 (14.08.1990), column 2, lines 37-57.</td>
<td>3, 7-13, 23, 24</td>
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<td>X</td>
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□ Further documents are listed in the continuation of Box C. □ See patent family annex.

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Date of the actual completion of the international search

Date of mailing of the international search report
21 MAY 2002

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