### Task:

- **Application field:** Ceramics / Glass
- **Material:** Alumina
- **Feed size:** 0-150 µm
- **Feed quantity:** 12 g
- **Material specification(s):** medium-hard, dry
- **Customer requirement(s):** Sieving; fractions < 45 µm; 45 - 75 µm; 75 - 150 µm; > 150 µm
- **Subsequent analysis:** not defined

### Solution:

- **Selected instrument(s):** Sieve Shaker AS 200 control
- **Configuration(s):**
  - Analytical sieves according to DIN ISO 3310-1 with 200 mm ø; 50 mm height: 45 µm / 75 µm / 150 µm;
  - Collecting pan stainless steel, 200 mm ø, height 50 mm;
  - Clamping device „comfort” AS 200 for test sieves 200/203 mm ø;
  - 15 x balls of steatite (each sieve)
- **Parameter(s):**
  - Amplitude: 1.2 mm
  - Intervall: 10 s
- **Time:** 8 min.
- **Achieved result(s):**
  - Sample A: 6.2 % < 45 µm; 45 - 75 µm: 19.5 %; 75 - 150 µm: 72.6 %; 1.8 % > 150 µm
  - Sample B: 21.6 % < 45 µm; 45 - 75 µm: 23.3 %; 75 - 150 µm: 53.4 %; 1.7 % > 150 µm
  - Sample C: 14.4 % < 45 µm; 45 - 75 µm: 20.3 %; 75 - 150 µm: 62.7 %; 2.5 % > 150 µm

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Remark(s): The sieve analysis was supported by using balls of steatite for each sieve as a sieving aid.

Recommendation: For the sieving of alumina the Sieve Shaker AS 200 control is suitable according to the above mentioned conditions.
Company: Kunz

Result file: C:\Program Files\EasySieve_E\SIEVEDAT\11521\11521_001.rdf

Task file: 11521.afg

Date: 28. 9. 2006 13:30

Sieve machine: AS 200 control

Amplitude [mm]: 1.21

Interval time[s]: 10.0

Material: Aluminium oxide

Sample quantity [g]: 11.40

Sieve loss [%]: 0.88

Sum loaded sieve weights [g]: 11.30

Sampling:

Sieve method: three-dimensional AS200

Sample preparation: 200 x 50 mm

Sieves according to standard: DIN ISO 3310-1

Sieve insert acceleration [g]: 7.4

Sieves according to standard: DIN ISO 3310-1

Sieve insert acceleration [g]: 7.4

Comment: Sample A

Size class  [mm]  p3 [%]  Q3 [%]

< 0.045  6.2  6.2

0.045 - 0.075  19.5  25.7

0.075 - 0.150  72.6  98.2

0.150 - 0.180  1.8  100.0

> 0.180  0.0  100.0

Characteristics:

Q3 [%]  x [mm]

10.0  0.051

50.0  0.100

90.0  0.141

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### 11521-Aluminium oxide

<table>
<thead>
<tr>
<th>Material</th>
<th>Sample quantity [g]:</th>
<th>Sieve loss [%]:</th>
<th>Sample preparation:</th>
<th>Sieve diameter:</th>
<th>Sieving aids:</th>
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</thead>
<tbody>
<tr>
<td>Aluminium oxide</td>
<td>11.30</td>
<td>-2.65</td>
<td>three-dimensional AS200</td>
<td>200 x 50 mm</td>
<td>Spheres</td>
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</tbody>
</table>

**Sieve Method:**
Sample B

**Task file:**
11521.afg

**Size classes:**

<table>
<thead>
<tr>
<th>Size class [mm]</th>
<th>p3 [%]</th>
<th>Q3 [%]</th>
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</thead>
<tbody>
<tr>
<td>&lt; 0.045</td>
<td>21.6</td>
<td>21.6</td>
</tr>
<tr>
<td>0.045 - 0.075</td>
<td>23.3</td>
<td>44.8</td>
</tr>
<tr>
<td>0.075 - 0.150</td>
<td>53.4</td>
<td>98.3</td>
</tr>
<tr>
<td>0.150 - 0.180</td>
<td>1.7</td>
<td>100.0</td>
</tr>
<tr>
<td>&gt; 0.180</td>
<td>0.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Characteristics:**

<table>
<thead>
<tr>
<th>Q3 [%]</th>
<th>x [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0</td>
<td>0.021</td>
</tr>
<tr>
<td>50.0</td>
<td>0.082</td>
</tr>
<tr>
<td>90.0</td>
<td>0.138</td>
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