

ELEVENTH ANNUAL CONFERENCE

YUCOMAT 2009

Hotel "Plaža", Herceg Novi, Montenegro, August 31 – September 4, 2009
<http://www.mrs-serbia.org.rs>



Programme and The Book of Abstracts

Organised by:

Materials Research Society of Serbia
and

**Institute of Technical Sciences of the
Serbian Academy of Sciences and Arts, Belgrade**

under the auspices of

Federation of European Materials Societies
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MECHANICAL ACTIVATION OF CLAY

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Comparative review of experimentally determined results of clay properties prepared according to classical procedures of processing and mechanical activation is presented. Mechanical activation of the same raw material was carried out in a lab. mill "Pulverisette 6" (Fritsch, Germany) over the time periods of 30, 60, 90 and 120 minutes. Testing of technological features relevant for process of forming, drying and firing of heavy clay products indicates the increase of plasticity and mechanical characteristics of products, lowering of firing temperatures, and changing of drying sensitivity in the case of mechanically activated clay. The drying process of the samples made from activated and inactivated clay was examined in detail. Two mathematical models, based on multi factorial experimental design technique, were set up. The first describes the moisture value and the second one the velocity value of the product when it reaches the critical point during drying, as a function of temperature, relative humidity and the velocity of the drying medium.