

Mechanochemical process

Abstract

5 The invention relates to a mechanochemical process for decontaminating and/or
for eliminating problematic, synthetic, biogenic and biological materials A; for breaking
down phosphates B; for immobilising metals and the compounds C thereof; for
separating carbon dioxide and carbon monoxide D into elements; and for recovering
valuable products E. The process comprises: - providing a material F to be milled
10 containing - at least one material A, B, C and/or D and - at least one type of carbon or
carbon-yielding material G, or alternatively providing the components of F and G
separately from one another; - filling the material F to be milled into a mechanical mill
(1), or alternatively - filling the components of the material F to be milled into a
mechanical mill (1) and - milling by means of milling elements (1.2) moved by agitation
15 means (1.4) or by means of rollers (1.4.6); after which - the resulting product I is
separated from the milling elements (1.2) or the rollers (1.4.6) and is discharged from
the milling chamber (1.1) and worked up. The invention also relates to the use of the
products I as valuable materials E, the use of a self-cooling electric motor (4) for driving
a mechanochemical mill (1), and mechanochemical mills (1) having new agitation
20 means (1.4).

Fig. 1