

ABSTRACTDRYING SUSPENSIONS OF MATERIALS

An apparatus and a process for drying a suspension of a finely divided particulate solid material to
5 produce the solid material in a substantially dry and unagglomerated form. The apparatus comprises a grinding chamber (1) containing a particulate grinding medium (12), means (21) for introducing a suspension of the particulate solid material into the grinding
10 chamber (1) and an impeller (8, 9) rotating in the grinding chamber (1). The grinding chamber (1) has a perforated base (3) through which a heated gas is introduced to provide an upward flow of gas through the grinding chamber (1) and through the grinding medium
15 (12). As the particulate solid material is dried, fine particles of the material are carried upwards in the upflow of gas through the grinding chamber (1) and may then be classified by classifying means (25) which separate the substantially dry product into a
20 relatively fine fraction and a relatively coarse fraction. Downstream of the grinding chamber and of the classifying means (25), if provided, are filter means which separate the solid particles from the suspended gas. The filter means may comprise one or
25 more cyclones (30) and/or a bag filter assembly

