

Liquidus surfaces in a part of the systems ZnO-PbO-SiO₂ and ZnO-"FeO"-SiO₂

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Liquidus surfaces in a part of the systems ZnO-PbO-SiO_2 and ZnO-FeO-SiO_2 .

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Liquidus surfaces in a part of the systems ZnO-PbO-SiO_2 and ZnO-FeO-SiO_2 were constructed by quenching method. The experiments were carried out in air in the system ZnO-PbO-SiO_2 . In the part investigated the primary phases were three ternary compounds ($\text{PbO}\cdot\text{ZnO}\cdot\text{SiO}_2$, $2\text{PbO}\cdot\text{ZnO}\cdot 2\text{SiO}_2$ and barysilite), three lead silicates, Zn_2SiO_4 and SiO_2 . Isotherms on the liquidus surface of each primary phase field were determined from 750 to 1300°C. In the system ZnO-FeO-SiO_2 the experiments were carried out in an atmosphere of purified nitrogen. In the part investigated the primary phases were Fe_2SiO_4 , Zn_2SiO_4 and SiO_2 . Isotherms on the liquidus surface of each primary phase field from 1150 to 1300°C and the ternary eutectic (1130°C, 15.9% ZnO, 48.2% FeO and 35.9% SiO_2) were determined.