

Slag Viscosity Calculation of the CaO-SiO₂-Al₂O₃-MgO System Using the FactSage 6.4 Software

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ABSTRACT

This study focuses on the behavior analysis of the module to calculate the viscosity of molten slag of the FactSage 6.4 software.

Data from the literature were used and the viscosity was calculated of 972 slags, in the CaO-SiO₂-Al₂O₃-MgO system, varying the composition within the range 2 to 58% CaO, 7.4 to 70% SiO₂, 0 to 40% Al₂O₃ and 0 to 38% MgO, and temperature range from 1050° C to 1750° C.

The software showed a tendency to produce viscosity values lower than those found in the literature. The average difference between the calculated and literature values was 32.06%, which according to literature studies, is considered suitable for molten steel slag viscosity.