

## **MOLTEN ALUMINIUM OXYCARBIDE, CONSIDERED AS AN IONIC MIXTURE**

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The possibilities of a carbothermal process for aluminium has attracted interest in the system Al-O-C for more than fifty years, and it still does. It is generally recognized that a potential process would involve a molten phase in the system  $\text{Al}_2\text{O}_3\text{-Al}_4\text{C}_3$ . The phase diagram of this system will be reviewed, including some words on the gas pressures at equilibrium in the presence of solid carbon. Then a thermodynamic model of the system will be presented, considering the molten phase as a mixture of the three ionic species  $\text{AlO}^+$ ,  $\text{AlO}_2^-$  and  $\text{AlC}^-$ .