



2010 **Title:** Investigation of Dissolved Gases in Smelt
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ABSTRACT:

Historically, smelt characteristics such as composition and temperature have been used when attempting to correlate changes in smelt viscosity and a lack of fluidity. However, these smelt properties would only seem to explain a relatively small change in viscosity. In studies, dissolved gases are known to increase viscosity in other materials by orders of magnitude. Measurements of the smelt from one recovery boiler indicated that it contained about 10 ft³ of dissolved carbon dioxide and carbon monoxide per cubic foot of smelt. The paper makes an initial exploration of this smelt property that may hold the key to overcoming problems with poor smelt fluidity.