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Stabilization of the Plasma-Jet Flame and Determination of Aluminium and Boron in Steel*

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Abstract

A stabilization of the plasma-jet flame was studied for the use of acid solutions, the apparatus was improved and working conditions for the determination of aluminium and boron in steel were examined. The coefficient of variation for the determination of aluminium (0.061%) in steel was 4.9%. These determinations are rather difficult by flame spectrometry or atomic absorption spectrometry using the usual combustion flame because of the formation of stable oxides of Al and B.

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