

METHODS AND SYSTEMS FOR CONTROLLING THE PRODUCTS OF COMBUSTION

Abstract

The present invention relates to methods and systems for controlling a combustion reaction and the products thereof. One embodiment includes a combustion control system having an oxygenation stream substantially comprising oxygen and CO₂ and having an oxygen to CO₂ ratio, then mixing the oxygenation stream with a combustion fuel stream and combusting in a combustor to generate a combustion products stream having a temperature and a composition detected by a temperature sensor and an oxygen analyzer, respectively, the data from which are used to control the flow and composition of the oxygenation and combustion fuel streams. The system may also include a gas turbine with an expander and having a load and a load controller in a feedback arrangement.

Figure 1A