

ABSTRACT

PREDICTION MODEL GENERATION DEVICE, EXHAUST GAS CONCENTRATION CONTROL SYSTEM, PREDICTION MODEL GENERATION METHOD, AND EXHAUST 5 GAS CONCENTRATION CONTROL METHOD

A prediction model generation device for generating an exhaust gas concentration prediction model which predicts a concentration of a gas component contained in an exhaust gas discharged from a furnace, the prediction model generation device comprising:

10 an image acquisition unit configured to acquire an image of a combustion region of the furnace;

an extraction unit configured to convert the image into color image data and extract a feature from the color image data;

15 an exhaust gas concentration acquisition unit configured to acquire a concentration of the gas component contained in the exhaust gas, on a downstream side of the combustion region, after a preset time has elapsed from the time when the image has been captured; and

a model generation unit configured to generate the exhaust gas concentration prediction model by machine-learning training data in which the feature extracted by the extraction unit and the concentration of the gas component acquired by the exhaust gas concentration
20 acquisition unit are associated with each other.

Figure 2.