



THERMOOPTICAL MEASURING TECHNIQUE - A high efficient tool in Clean Coal Technologies to increase the efficiency of coal combustion and minimize negative emissions

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The optimization of the combustion process and the analysis of combustion products and the possible reduction and capture during combustion are key factors for the reduction of GHG (Green-House-Gases) as CO₂ and non-GHG as NO_x, SO₂, PM (Particular Matter) or Mercury. The Fraunhofer ISC works since over 20 years on the development of new measuring methods to optimize the heat treatment of material. One special focus lies on Thermo-Optical Measurement systems designed for in situ characterization of materials within each kind of heat treatment under variable conditions. The application of Thermo-Optical Measuring method (TOM) was used to analyze coal firing process and slag behavior in the boiler to determine critical temperature parameters and increase the efficiency of coal firing, also with focus on reduction of negative emission of CO₂ and Mercury.

