

On Line Quality Control of Fly Ash According to the European Standards

Hans Georg Conrads¹, Dr. Herbert Prenzel²

¹PROMECON GmbH, Steinfeldstrasse 3, 39179 Barleben, Germany; ²E-ON Engineering Central Laboratory, Bergmannsglückstrasse 41-43, 45896 Gelsenkirchen-Buer, Germany

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ABSTRACT:

The European guidelines for fly ash quality call for strict compliance with clearly defined quality parameters. These quality guidelines need to be fulfilled in order to resell the fly ash to users such as cement plants. The use of more variable fuel types, the use of secondary fuels as well as efforts to increase boiler efficiency and reduce NO_x have an effect on the fly ash such that the qualities of the fly ash are subject to larger variations. Especially the Loss on Ignition is a highly variable parameter. The paper shows how modern on line technology has to be applied in order to obtain truly representative and reliable data for the evaluation of the fly ash quality. All aspects of the quality control are evaluated such as: representative sampling in the ash stream, comparability of unburned carbon to loss on ignition with various fuel types, the quality control regime to ensure the accuracy of the on line measurement system in comparison with laboratory standards and auditing of the QC process. The example shown is a group of 3 power stations with a total of 12 coal fired boilers. All fly ash from those boilers is monitored by on line devices. The data is used by the central laboratory of E-ON Engineering to optimize the fly ash quality in respect to the specific fuel types and to increase fly ash sales revenue.