

## Melting of coal ashes

### Introduction

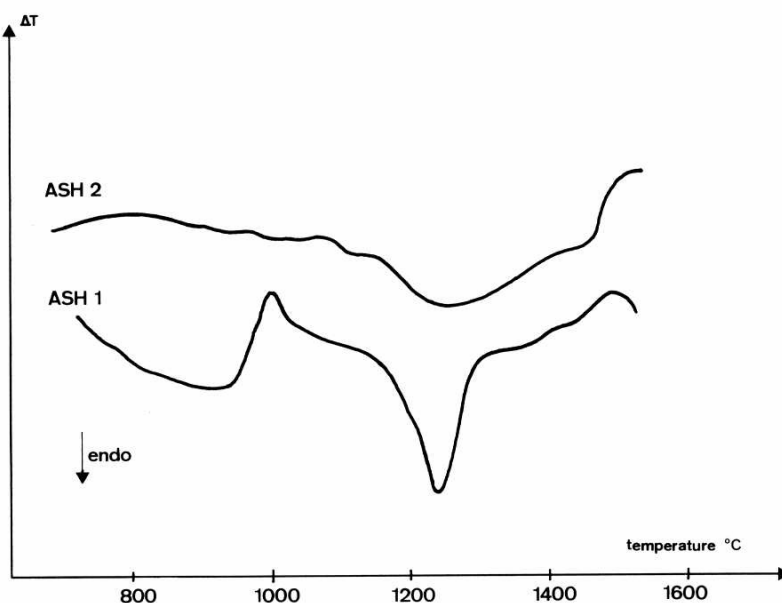
Melting of ashes is of a high importance in the use of coal. According to the conditions of use, it can be interesting or forbidden.

Melting of ashes depends on their Chemical composition, and also the type of atmosphere in which melting occurs.

A coal has rather fusible ashes when the melting point is about 1300°C.

If melting does not occur below 1500°C, ashes are said refractory.

Setsys DTA is used to characterize the melting of two ashes.



### Experimental

Samples :

Coal Ash 1 (66.5 mg)

Coal Ash 2 (49.0 mg)

Crucible : Platinum

Atmosphere : Argon

Heating mode : 10 K.min<sup>-1</sup>

### Conclusion

Two ashes are heated up to 1500°C.

Ash 1 shows, after an exothermic effect, a well-defined endothermic peak corresponding to ash melting. The melting point is 1240°C.

On the other hand, ash 2 does not show any melting peak below 1500°C. This ash can be considered as refractory.

### Instrument

Setsys Evolution DTA

-150 to 2400°C

