

Translation from the Hungarian language

Coal beneficiation experiment

performed by the Öko TECT Kft Csaba Jancsák, and Ilona Búzás Baranyainé

Subject: Nagymányok coal as collected randomly

first it was grinded, then it underwent the test

On the 12th and 13th March 2013

<u>Classification</u>	ash %	coal %
> 400 μ	48	30
400 - 200 μ	48	33
200 - 100 μ	57	23
- 100 μ	66	16
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Σ	54,15	25

After application of the cyclone, mixing ratio 15%, pressure 1 bar is the best

	ash %	coal %
upper	62,84	16,27
lower	48,79	29,43

On the 6th and 7th October 2013

After two cycles of cyclone the lower outflow:

	heating value kJ/kg	ash %	water %	coal %
0 – 300 μ	16330	25,62	7,29	53,03
0 – 4 mm	16862	24,39	7,29	54,60
0 – 4 mm	14855	30,35	7,29	49,07

The goal was to use the first cyclone cycle to enrich the coal content of the most coal rich fraction in the material with corn size less than 4 mm, while in the second cyclone cycle the marl and a part of the water shall be removed.

This part of the experiment was performed with the available equipment successfully, although on a limited way.

Two purposes designed special cyclones could have an even better performance.

The pellets manufactured by János Bajáry have a heating value of ca. 16600kJ/kg with coal content of 55%, its ash content of ca. 25% is in line with the expected values: coal 50-55%, ash 25-30%.

It burns well and can be well burnt in the household boilers.