

Appendix 14.

TENT A6_ Fly ash resistivity

MAINTENANCE DEPARTEMENT

Head of Maintenance and Arrangement Service

Subject: Handing over of Unit A3 electrostatic precipitators data for major overhaul

On 20.12. 2002, for Unit A3 major overhaul regarding the electrostatic precipitators (EP), to Lurgi Lentjes representative were provided the data referring to EP dust removal efficiency, particles concentration in flying ash after EP and other parameters important for EP operation. Afterwards were submitted the data regarding ash specific resistance (SR) seeing that this data is important for operation i.e. for EP dust removal efficiency.

It is also mentioned that there were only a few, older date, data regarding ash specific resistance. **Optimum range of SR is 10^4 - 10^{10} Ω cm.**

Measuring SR in TPP "Nikola Tesla " A and TPP Kolubara A pointed out that flying ash arisen from combustion of lignite with low content of sulphur in coal ($S < 1\%$), had high SR, which was higher than 10^{12} Ω cm and the values were:

| | | | |
|-----|----------------|--------------------------------------------|-------------------------|
| /1/ | A2 | $SR < 5 \times 10^{10} \Omega\text{cm}$ | $t = 157^\circ\text{C}$ |
| /2/ | TPP NT A | $SR < 6,94 \times 10^{12} \Omega\text{cm}$ | $t = 168^\circ\text{C}$ |
| | TPP Kolubara A | $SR < 3,23 \times 10^{13} \Omega\text{cm}$ | $t = 195^\circ\text{C}$ |
| /3/ | TPP NT A | $SR < 5,0 \times 10^{12} \Omega\text{cm}$ | $t = 181^\circ\text{C}$ |

- /1/ Warranty tests of Unit A2 in TPP Nikola Tesla A, RI Belgrade-Zemun, 1972.
/2 and 3/ EP Performance optimization in plants burning pulverized coal
II part – Design basis and performance optimization of electrostatic separators, Mechanical Engineering Faculty, Belgrade, RI Belgrade – Zemun, Belgrade 1981. Note: Tests in TPP Nikola Tesla A were performed in 1977 and 1979 and in TPP Kolubara in 1977.

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