

**EXTRACT FROM DEAT 'GUIDELINES FOR SCHEDULED PROCESSES' (1994)**

**PROCESS 29: POWER GENERATION PROCESSES**

Power generation processes: That is to say, processes in which-

- (a) fuel is burned for the generation of electricity for distribution to the public or for purposes of public transport;
- (b) boilers capable of burning fuel at a rate of not less than 10 tons per hour are used to raise steam for the supply or energy for purposes other than those mentioned in (a) above;
- (c) a fuel burning appliance is used that is not controlled in terms of Part III of this Act, excluding appliances in private dwellings.

(a) Basic Information

- (i) Low sulphur content of coal is detrimental to efficacy of electrofilter units.
- (ii) 1 Ton/h coal produces 10 t/h steam =  $\pm 22$  GJ/h.
- (iii) Standard cubic metre ( $\text{Sm}^3$  means at 101,3 KPa and 0°C.

(b) Guidelines

II PF plants:

- (i) Existing plants: fly-ash emission limits:

discretion of control officer - gas conditioning if possible in which case the guidelines are as follows:

- (1) 3-field electrofilter : 270 mg/ $\text{Sm}^3$  (actual  $\text{m}^3$ )
- (2) 2-field electrofilter : 320 mg/ $\text{Sm}^3$  (actual  $\text{m}^3$ )

- (ii) New Plants:

- (1) not more than 100 mg/ $\text{Sm}^3$  fly-ash.
- (2) "Low NOx" burners must be used.
- (3) All new plants to be fitted with opacity monitors - aim at 30% opacity - optical monitor must be fitted with time integrator having six minute intervals. Electrofilters to be fitted with secondary ammeters and voltmeters.
- (4) At least 70% of sulphur in the coal must be removed or captured.