COMBUSTION PLANTS USING NON-COMMERCIAL FUELS IN CHEMICAL INDUSTRY

CEFIC

NOTE: BREF LCP AND EGTEI STUDY DON'T COVER PROCESS FURNACES OR HEATERS

COMBUSTION PLANTS IN CHEMICAL INDUSTRY

- Capacity: 50 to 250 MWth of steam to support the production of the chemical plant in all situations that may occur during industrial operations.
- Utility boilers located inside the chemical plant.
- Combined Heat-Power plant (CHP) different from combined cycle (CCGT).
- Non commercial fuel as by product of the process.
- Multi – fuel firing in variable range and composition.
PARTICULARITIES OF UTILITY BOILERS

- Variable load operation due to the process: exceptional, start up, shut down
- Variable fuel composition and back up fuels.
- Daily emissions may be very higher from yearly average values.
- Some BAT not feasible for exceptional operation situations.
- Layout of existing installations that don’t allow for retrofitting with some BAT.
- Restricted size of the firebox that may hamper for installation of some BAT.
- Reduced performances of BAT in existing installations.

PARTICULARITIES OF NON COMMERCIAL FUELS

- Variable availability of fuels: multi-fuel firing, fuels switch, flexibility
- Variable composition due to process: Hydrogen, Nitrogen, sulfur, ash, catalytic fines, metals,...
- NOx emission performance with primary measures
CONCLUSIONS

- Technical feasibility of BAT is highly dependent on the installations.
- Economical feasibility of BAT is not demonstrated for the exceptional case of operation.
- Particularities of non commercial fuel and multi fuel firing should lead to higher BAT AEL for daily average and yearly average as well.
- Cost of reduction techniques may be different for chemical sector than for power generation sector.