# **Coke Oven Process Flow Diagram**

#### **Simplified Process Flow Diagram TIPPLER AREA GAS PLANT** 1. Tippler Soft water plant Boiler Steam Clean Gas back to Coke Ovens (Battery 5) Benzol Scrubbers Flair Crusher Coal **Primary Coolers** Exhauster Final 2. Coke Oven Coolers 9. Battery 5 Tar Separator Ammonia Scrubbers BATTERY Clean Gas **AREA** to PTA Works **SCREENING PLANT** Coke 3. Screening Plant Warm Coke Flushing Liquor Benzol Coke Tank Flushing Liquor **Coke Grades** 0-6mm 6-30mm 28% **CLEAN COKE OVEN GAS DISTRIBUTION** 30-80mm 65% Battery heating :55% 4. Heavy 4. Heavy Residual Residual **Boilers** :30% Separator Separator Mills :10% : 5% Flare

# Plant Detail and Throughput

### **Battery Characteristics**

Year built 1960 - 1963

Type WOODALL-DUCKAM

• Total number of ovens 51

• Coal volume m3 18,4 cubic meter

Coal mass dry 13.8 tons

Heating time (h) 19.5

### Plant Throughput

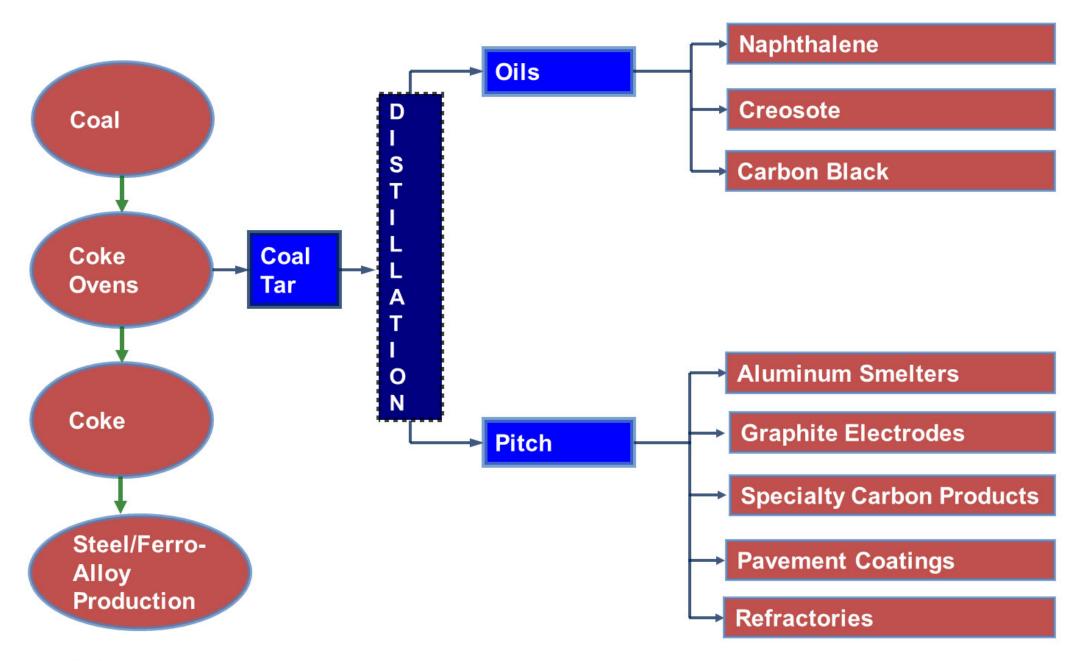
Coal throughput per annum 332 000 tons

Coke production per annum
226 000 tons

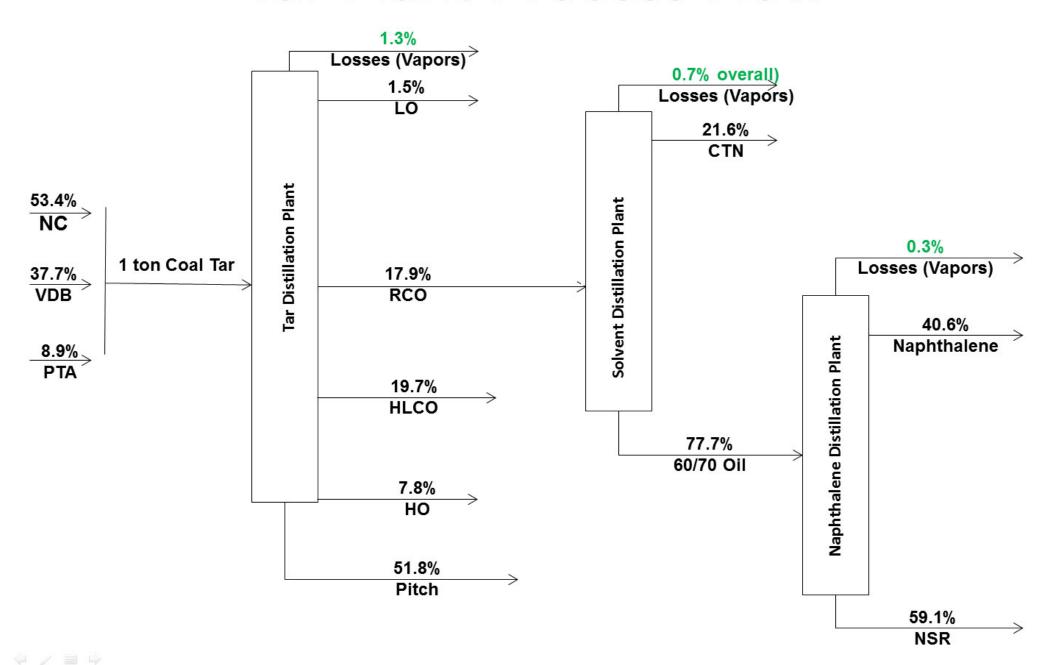
Total Gas production per hour 15 600 Nm<sup>3</sup>

Tar Production per annum 12 600 ton

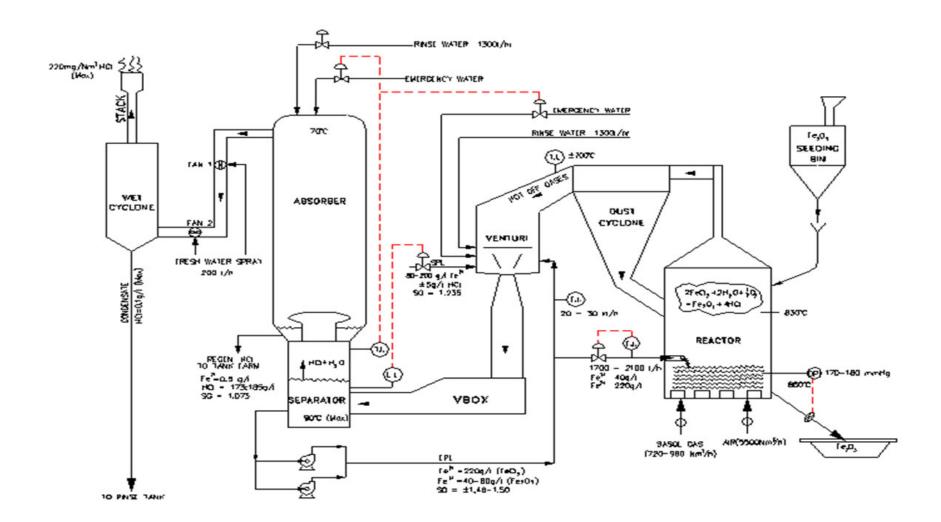
### The Coal/Coke/Tar/Pitch Process



## Tar Plant Process Flow



### **HCl Process Flow**





# Plants Background and Throughput

### Tar Plant

- Facility commissioned in 1985.
- Capacity: 240 000 tonnes/year.
- Current Crude Tar being processed: 118 000 tonnes/year
- Complement excluding contractors: 80

### **HCl Plant**

- Facility commissioned in 1972
- Capacity: 81 000 tonnes/year
- Current throughput: 49 000 tonnes
- Complement excluding contractors: 11