

COGEN™ SYSTEMS COAL FIRED POWER PLANT

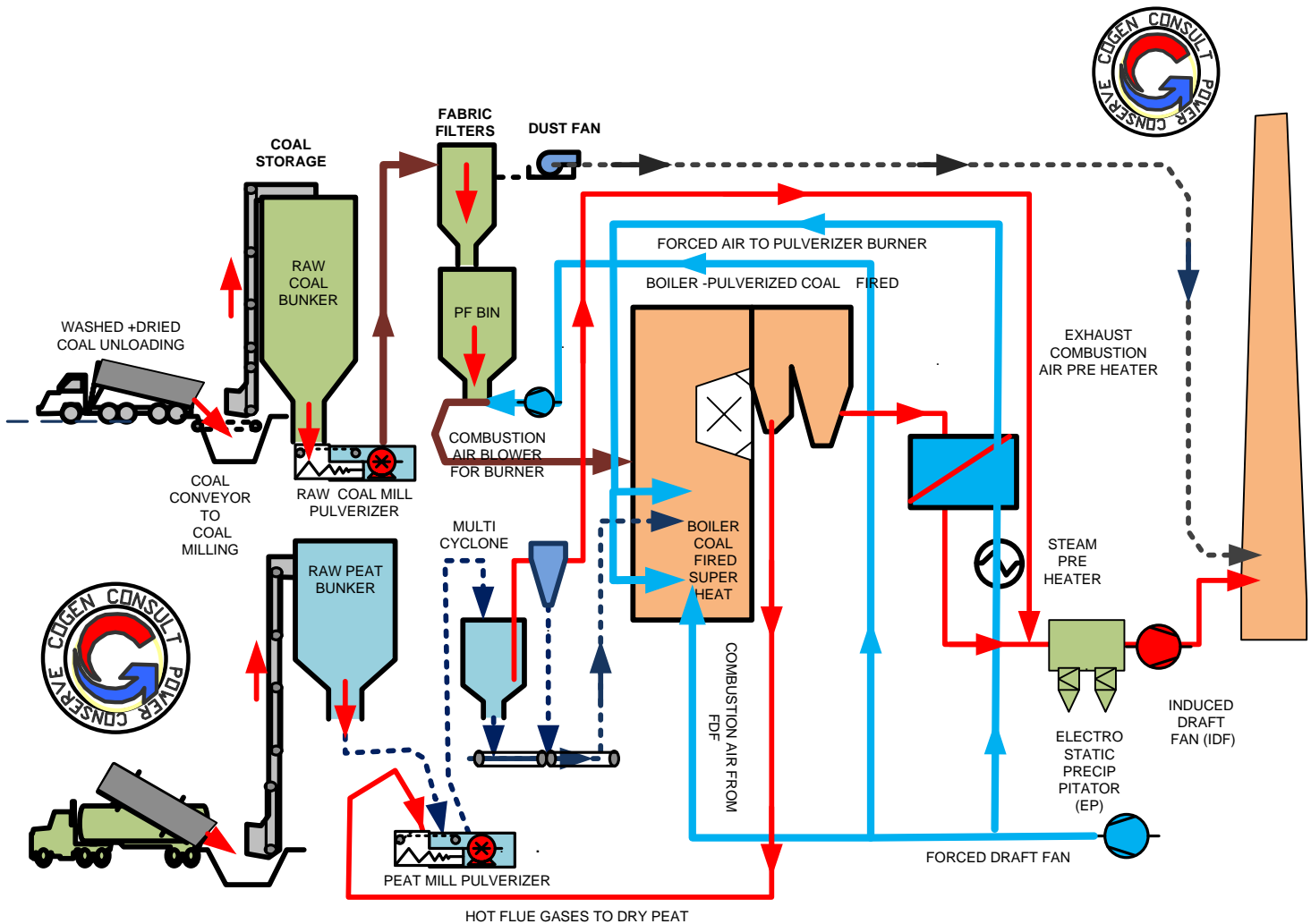


Address: 111-A/2,3rd. Street,Phase-6,Kh-e-Muhafiz,DHA,Karachi-75500,
Pakistan,, Ph-0092-21-35340068, 35340071, Mob-009221-8287009, 0302 8287009,
E-mail:cogenpak@gmail.com, Web:www.cogensys.pk,

TURN COAL TO ELECTRIC POWER & STEAM

THINK & ACT –UTILIZE LOCAL COAL FOR POWER GEN.

Pulverized Coal Boiler can use Brown Peat Coal,Low Bituminuos Coal, very Efficiently.High Flame temperature & High Combustion Efficiency is achieved thru Pulverized Coal Combustion.



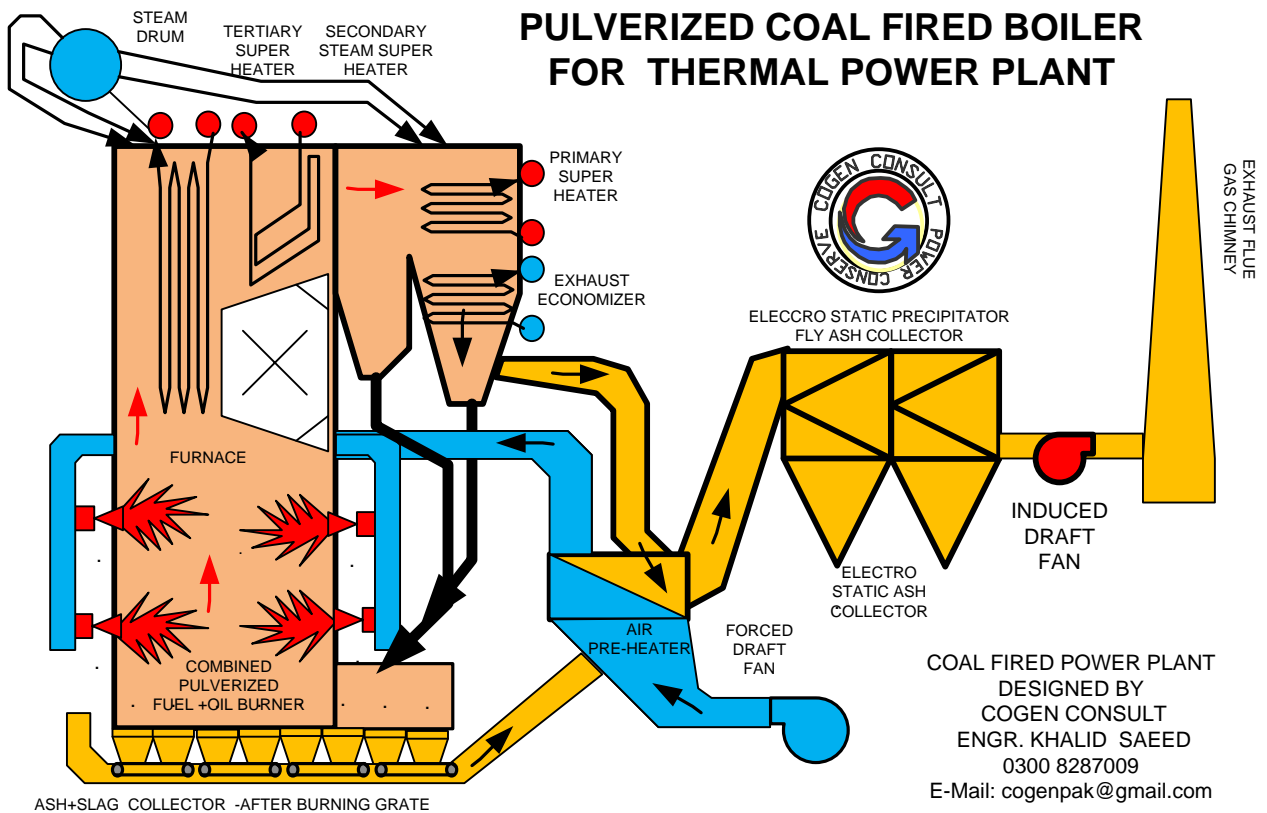
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Pulverized coal is 240 Mesh size (0.063 mm wheat flour like) powder Horizontal Firing,fired with hot combustion air , and supported with secondary combustion air.

Volatile matter & Cokes Burns very Efficiently ,high Flame Speed @15 M/sec. Pulverized Coal powder flow with air pressure @20M/Sec.



Pulverized Coal Particle Combustion Satges,

- a) Distillation @ 0.005 Seconds.
- b) 50% Coal Burnt in 0.05 Seconds.
- c) 100% Burnt in 0.1-0.3 Seconds with 0% Carbon Mono Oxides.

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COAL FIRED THERMAL POWER PLANT MAIN COMPONENTS

COAL/PEAT AS FUEL STOCK & PREPARATION SYSTEM:

- 1) Coal unloading Bay (Truck/Train) decanting
- 2) Raw Coal/Peat Bunkers & Distrubtions
- 3) Raw Coal/Peat lifting Vertical Conveyors System
- 4) Coal/Peat Pulverizing Crushing Ball Mills
- 5) Coal/Peat Disc Screening.
- 6) Fabric Filters for Pulverized Coal Seperation
- 7) Pulverized Coal/Peat Stock/Bins
- 8) Coal/Peat Transport Piping
- 9) Coal/Peat feeder to Burners
- 10) Cyclones to Trap the Pulverized Coal Dust
- 11) Multi Cyclone to Trap/recovery the Coal Dust

COAL FIRED BOILERMAJOR COMPONENTS:

- 12) Boiler Furnace.
- 13) Combustion Pulverized Fuel/Oil Burners.
- 14) Steam water Drum.
- 15) Water Treatment Plant/ Demin. /ROP.
- 16) Thermal De-salination Unit.
- 17) Treated water Storage tank
- 18) Boiler feed water Pumps.
- 19) Feed water Tank.
- 20) Feed water Deaerator.
- 21) Feed Water Piping to Turbine.
- 22) Economizer
- 23) Primary upper heater
- 24) Secondary Super heater
- 25) Tertiary Super heater

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26) Steam Piping till Turbine.

COMBUSTION AIR SYSTEM

27) Forced Draft Fan + FILTERS (FDF)

28) Boiler Air Pre heater

29) Combustion Air Blowers for Burners.

COMBUSTION CONTROL SYSTEMS COAL BOILER& AUXILIARIES.

30) Coal Firing Controls Systems (Gravimartic Coal flow).

31) Air Seal Systems Leak detections

32) Combustion Air pressure Atomizing controls

33) Burner Flame Quality Controls

34) Exhaust Flue gas Analysis

35) Pressure temp gauges Transmitters.

STEAM TURBINES GENERATOR & AUXILIARIES

36) Steam Turbines genset

37) Lube Oil Tank for Turbines

38) Gear Box between Turbine & Alternator.

39) Steam Control Valves

40) Condenser & Steam Ejector /Hogger.

41) Condenser Cooling close Loop Circuit

42) Condensate re-circulation Pumps 1-2 Close Loop

43) Plate heat exchanger for Condenser, close loop

44) Cooling Water Pumps for Open Circuit

45) Cooling Towers for Condenser

46) Boiler Control Room

47) Power & Control cables on the Boiler & Aux.

48) Control Room Air conditioning.

49) Pressure temp gauges Transmitters.

ELECTRIC CONTROLS SWITCH GEAR ,MCC PANELS.

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- 50) Switchgear Panel
 - 51) Load take Off Panle
 - 52) Auxiliary Transformer 11 KV to 400V
 - 53) Step Down transformer 11 KV to 400V Load LT room.
 - 54) Power cables from Turbines 11 KV to SwGr Room.
 - 55) Power cable 11 KV Sw gr room to Aux-Transformer.
 - 56) Power cables from 400 V Step Dwn Transformer to MCC.
 - 57) Power cable from Sw gr 11 KV to main LT room
 - 58) Cable Trays forPower cables
 - 59) Controlcables for Turbine & Auxliries Systems
 - 60) Control Cables Trays Conduit.
 - 61) Control Room ventilation Air conditioning.
 - 62) Power Measuring Energy meters.
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**For detaildesign ,feasibility ,Project Management
,Execution,Installation top Supervisions,testing ,Pre
Commissioning, Commissioning, Operation &
maintenance,Please call or Write to**

**ENGR. KHALID SAEED
COGEN CONSULT
0300 8287009
E-mail: cogenpak@gmail.com
Ph-0092-21-35340068 & 71
Karachi Pakistan**