

WORKSHOP
on
Environment Friendly Technologies
Session I – CFBC Technology

November 2014
New Delhi

Characteristics of CFBC and its Advantages

- Fuel Flexibility
 - High to low grade fuels
 - Washery rejects/ opportunity fuels
 - High sulphur fuels
 - co firing of other fuels
- Lower operating temperatures
 - Low NO_x formation
 - Lower slagging/fouling
- In- situ sulphur capture, FGD avoided
- Compact boiler size
- Pulverisation eliminated

Trends in CFBC Technology

- Unit size increased from 35 MW(1994) to now 800 MW being commercially offered
- Sub critical range (up to 300-340 MW) in operation
- Supercritical units(460 MW, 282bar/567/582) in operation
- Units of 550 MW and 600 MW with supercritical parameters under construction
- Largest unit in India 250 MW at Neyveli
- Oxy CFBCs are also being developed

Major CFBC units in India

		PLF %	APC
• Neyveli Lig	2x250 MW	Under Commsg	
• Surat Lignite	4x125 MW	61.53	>15
• Giral TPS	2x125 MW	19.42	>15
• Barsingsar(NLC)	2x125 MW	53.93	8.32
• Kutch Lignite	1x75 MW		> 12
• Akrimota	2x125 MW	27.53	>15
• Jallippa Kapurdi	8x125 MW	56.40	
• Kasaipalli (ACB)	2x135 MW	71.77	
• Thammanipatnam	2x150 MW	77.62	
• Bajaj Energy	10x45 MW	70.30	

Few other smaller units not included above

CFBC as an option for India

- CFBC for fuels like Lignite / washery rejects/ high sulphur fuels is considered as a viable technology in sub- critical range.
- Large in-house and international operating experience available.
- A viability may emerge in future due to
 - inadequate availability of coal/ coal blending/multifuel
 - coal quality variations (linked mine supply may not always be feasible)
 - varying sources of imported coal during plant life

CFBC for India

- As per CEA, future plants to be designed for blend ratio upto 30% with High GCV fuels. Availability of large size efficient units with supercritical parameters provide a window of opportunity for such units.

However, it needs to be weighed cautiously considering our experience so far and also our readiness in terms of operational comfort.

THANKS