Plant visit & study of existing systems of 35TPH boiler

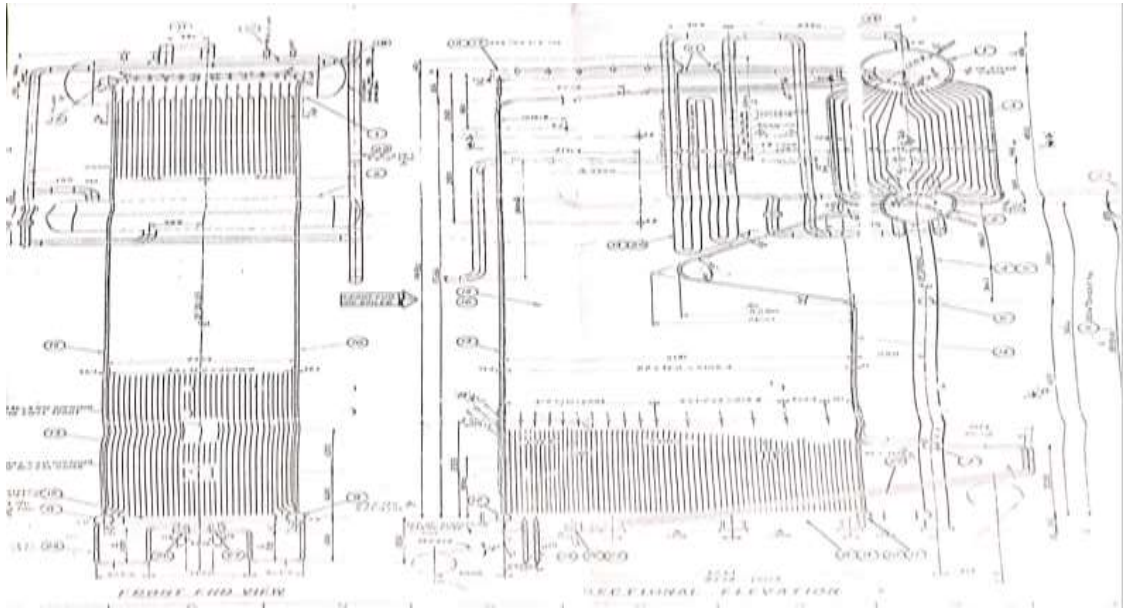
Client: ITC Limited - Paperboards & Specialty Papers Division (TRIBENI UNIT)

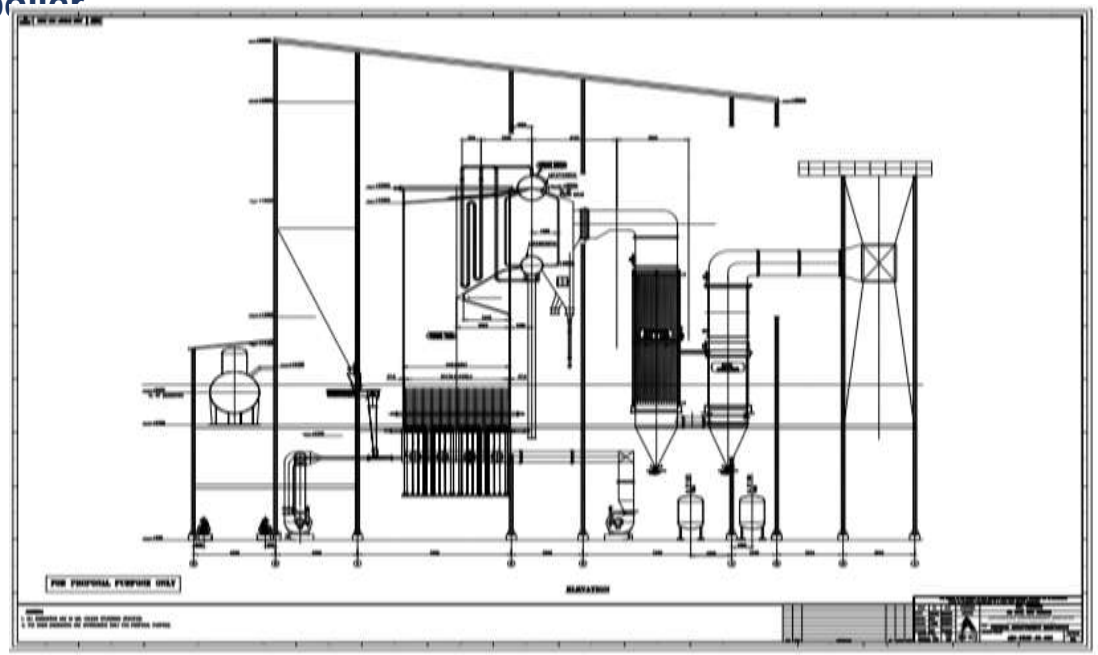
Project: ITC TRIBENI

Scope Of Work: Repowering options for the existing 35 TPH Ignifluid boiler for the following:

1) Discussions about the shortfall in boiler capacity, evaluation of the possible issues and recommendations

2) Discussion on various fuels to be fired in combination for the current boiler





Plant visit & study of existing systems of 35TPH boiler

Client: ITC Limited - Paperboards & Specialty Papers Division (TRIBENI UNIT)

Project: ITC TRIBENI

ITC - PSPD, TRIBENI UNIT
PROS & CONS FOR VARIOUS OPTIONS CONSIDERED

Sl. No.	Scope considered	Option 1 - As it is revamping	Option 2 - Converting to 35 TPH FBC Boiler	Option 3 - Converting to 45 TPH FBC Boiler	Option 4 - New 45 TPH FBC Boiler in Existing Steel Structures
1	Boiler parameters	35 TPH / 24 kscg / 340 C	35 TPH / 24 kscg / 340 C	45 TPH / 35 kscg / 425 C	45 TPH / 68 kscg / 480 C
2	Mapping and STAAD Pro Analysis	MUST	MUST	MUST	MUST
3	Background / Priority consideration	Safe operation with minimum automation Less investment Lower downtime Efficient operation	Safe operation with essential automation Less investment Lower downtime Efficient operation	Safe and efficient operation Quicker payback period Relatively a lower investment Relatively a lower downtime	Brand new boiler without any hassles No lingering on old boiler components State of the art technology
4	Positive Points	Lesser investment among all options considered	Relatively a still lesser investment among all options considered	Unit becomes a cogen instead of process boiler and results in a high degree of operational flexibility since this boiler can continuously run keeping the Enmas boiler as standby. This would increase the life of Enmas boiler also.	Excess capacity can be used for additional power generation whenever there is a plant expansion
		Lower downtime among all options considered	Relatively a lower downtime among all options considered	Additional power generated results in higher revenue to the company and also dependency on SEB grid is reduced	
			Boiler would be safe with all essential required automation and thermal efficiency is high	Boiler would be safe with all essential required automation and thermal efficiency is high	Boiler would be safe with all essential required automation and thermal efficiency is high
			There are plenty of BFB boilers operating in India and there is no dearth of operating experience with a BFB boiler unlike the IBIL boiler.	There are plenty of BFB boilers operating in India and there is no dearth of operating experience with a BFB boiler unlike the IBIL boiler.	There are plenty of BFB boilers operating in India and there is no dearth of operating experience with a BFB boiler unlike the IBIL boiler.
			Very less maintenance except for in-bed tubes replacement which once taken care of will result in almost nil forced outages	Very less maintenance except for in-bed tubes replacement which once taken care of will result in almost nil forced outages	Very less maintenance except for in-bed tubes replacement which once taken care of will result in almost nil forced outages
			ITC operating team is highly experienced and comfortable operating a similar design Enmas AFBC boiler. No possibility of clashing of methodologies in operating the boiler	ITC operating team is highly experienced and comfortable operating a similar design Enmas AFBC boiler. No possibility of clashing of methodologies in operating the boiler	ITC operating team is highly experienced and comfortable operating a similar design Enmas AFBC boiler. No possibility of clashing of methodologies in operating the boiler
			More fuel flexibility compared to IBIL boiler	More fuel flexibility compared to IBIL boiler	More fuel flexibility compared to IBIL boiler
				Lowest payback period among all the options	
5	Negative Points	Boiler capacity can be 30-35 TPH only	Boiler capacity can be 30-35 TPH only		No immediate returns except the assurance of no loss of production
		Boiler would be safe with minimal required automation	New components added, resulting in additional civil works and E&C time.	New components added, resulting in additional civil works and E&C time.	New components added, resulting in additional civil works and E&C time.
		The technology is almost obsolete and no OEM support is available for resolving issues	Investment cost is more than that of Option 1.	Investment cost is more than that of Option 1 & Option 2.	Investment cost is more than that of all other Options
		Maintenance prone with a moving grate in the high temperature zone	Downtime is more than that of Option 1.	Downtime is more than that of Option 1.	Downtime is more than that of all other Options
		Operation team may experience clash of procedures between the IBIL and Enmas boilers			