

Cochrane Engineering



Cochrane Engineering (Pvt) Ltd

Composite Boiler

INTRODUCTION

As an addition to the current range of shell boilers Cochrane Engineering (Pvt) Ltd has developed the COMPOSITE range of boilers. The design philosophy of the COMPOSITE is based on the perceived need in developing countries, to find a viable alternative to the use of oil firing for process heating and energy requirements.

Cochrane's have developed the composite since 1983 and can now offer the fuel range of units from 7 Tonnes/hr to 25 Tonnes/hr. The design complies with British standards BS2790 and BS1113.

FEATURES

Application

The Composite is most effective in situations where there are relatively large quantities of fibrous/cellulose refuse available from agro-industrial enterprises. This refuse has considerable potential even if it has a high relevant moisture content.

Efficiency

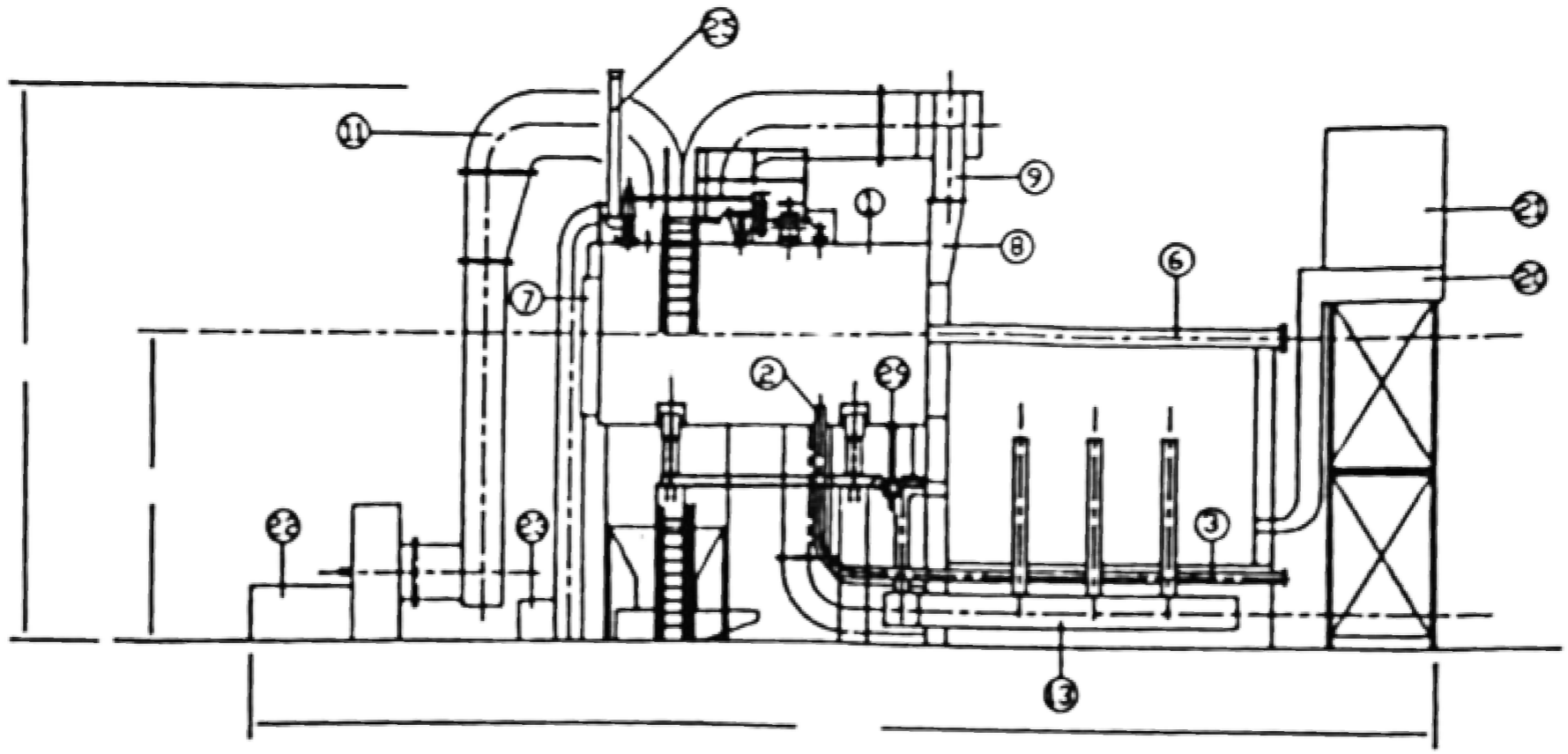
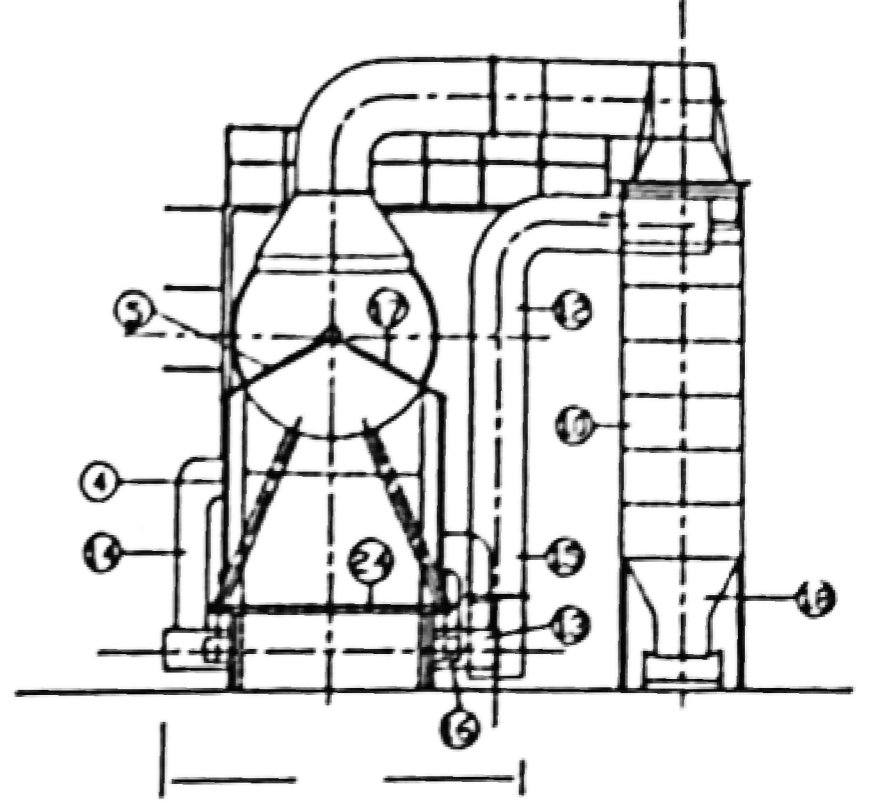
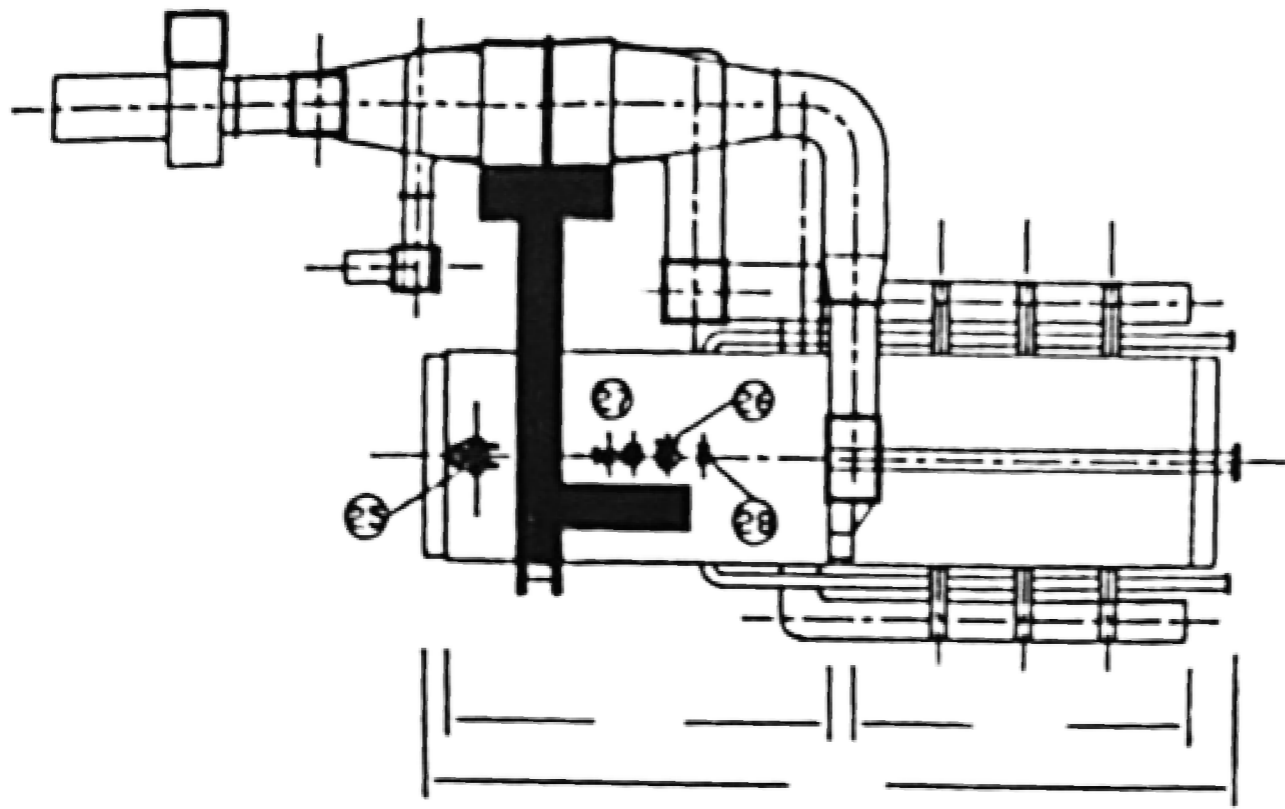
The Composite, when fired on a typical fibrous fuel such as wood bark, having a GCV of 11,3 Mj/kg and typically 45% moisture, will achieve an efficiency of up to and including 72%.

Steam Quality

The Composite is designed for working pressures of 1035 kPa up to a maximum of 3200 kPa. The steam may be saturated for direct process heating or superheated for use in turbo-generation.

Concept

The design of the Composite is based on a radiant water tube furnace connected to a convective shell boiler section of 2 passes. Where moisture content of the fuel exceeds 35% an air pre-heater is included thereby allowing fuels of up to 55% moisture to be burnt effectively.



COMPOSITE BOILER

MODEL		CB7	CB10	CB15	CB20	CB25	
EVAPORATION RATE From and at 100deg(C)	KG/HR	4700	6250	8450	10500	12450	
WORKING PRESSURE	KPA	1000	1000	1000	1000	1000	
BOILER DIMENSIONS in mm	A	6750	6900	7000	7100	6900	
	B	1900	2050	2375	2375	2500	
	C	1750	1750	1875	1875	2500	
	D	4225	4525	5250	5250	5500	
	E	2400	2700	3350	3350	3600	
RECOMMENDED CHIMNEY DIAMETER	mm	1000	1100	1400	1700	1900	
SAFETY VALVE ESCAPE PIPE	mm	90	150	150	150x2	150x2	
DIAMETER MAIN STEAM STOP VALVE DIAMETER	mm	150	150	200	200	250	
BLOWDOWN VALVE DIAMETER	mm	50x3	50x3	50x3	50x3	50x3	
FEEDWATER INLET DIAMETER	mm	63,5	63,5	63,5	63,5x2	63,5x2	
BOILER WEIGHT - EMPTY - TO NWL - FULL	TONNE	16	25	44	63	82	
	TONNE	33	50	84	118	152	
	TONNE	39	56	90	124	158	
FUEL CONSUMPTION							
	• wood (GVC 11,35 MJ/hr) 45% H2O	KG/HR	2278	3100	4650	6200	7750
• coal (optional) (GVC 39,00 GJ/hr)	KG/HR	766	1014	1520	2030	2540	
INSTALLED POWER	KW	70	85	125	160	200	

AFTER SALES SERVICE

The client package

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Over

65 years
experience