

NOTES

1. MASS AND HEAT BALANCE DOES NOT ACCOUNT FOR FLUE GAS RECYCLE.

HOLDS.

1. HEAT AND MASS BALANCE TO BE CONFIRMED.

ITEM No.	024/100/01,02,03,04
DESCRIPTION	PACKAGE BOILERS
CAPACITY OR DIMENSIONS	PRODUCE 94tpd STEAM AT 24barg AND 260°C
MATS OF CONSTN	TBC
NUMBER OF	ON LINE 1 TO 4 STAND BY 1 TO 3 TOTAL 4

STREAM No.	1	2	3	4	5	6	7	9	STREAM No.
COMPONENT FLOWS	BFW	COMBUSTION AIR	NAT GAS	SUPERHEATED STEAM	RAW WATER	BLOWDOWN	DRAINS	FLUE GAS	COMPONENT FLOWS
WATER kg/h	95410			94000	6348		7758	11507	WATER kg/h
OXYGEN kg/h		21736						630	OXYGEN kg/h
NITROGEN kg/h		71546						71620	NITROGEN kg/h
NATURAL GAS kg/h			5740						NATURAL GAS kg/h
CO2 kg/h								15259	CO2 kg/h
NOx kg/h								6	NOx kg/h
TOTAL FLOW kg/h	95410	93282	5740	94000	6348	1410	7758	99021	TOTAL FLOW kg/h
TOTAL FLOW m³/h	99.39	77734.67	2391.55	8392.86	6.35	1.69	7.85	124180	TOTAL FLOW m³/h
TEMPERATURE DegC	100	10	10	260	10	224	50	152	TEMPERATURE DegC
DENSITY kg/m³	960	1.2	2.4	11.2	1000	835	988	0.7	DENSITY kg/m³
PRESSURE bar g	35	0	2	24	4.8	24	0	0 (TBC)	PRESSURE bar g
ENTHALPY kJ/kg	421.7	283.5	51505	2907	42.6	962	209	174.5	ENTHALPY kJ/kg
TOTAL HEAT FLOW kW	11176	7346		75905	75	377	450	4800	TOTAL HEAT FLOW kW
COMMENTS	AT 105°C FROM DEAERATOR, COOLS TO 100°C AT TP		ENTHALPY BASED ON 40.38MJ/sm³					PRESSURE ASSUMED	COMMENTS

01	17.10.18	PRELIMINARY	AR	JW	JW
REV	DATE	DESCRIPTION	DRN	CHK'D	APP'D



PROJECT No: 17202101

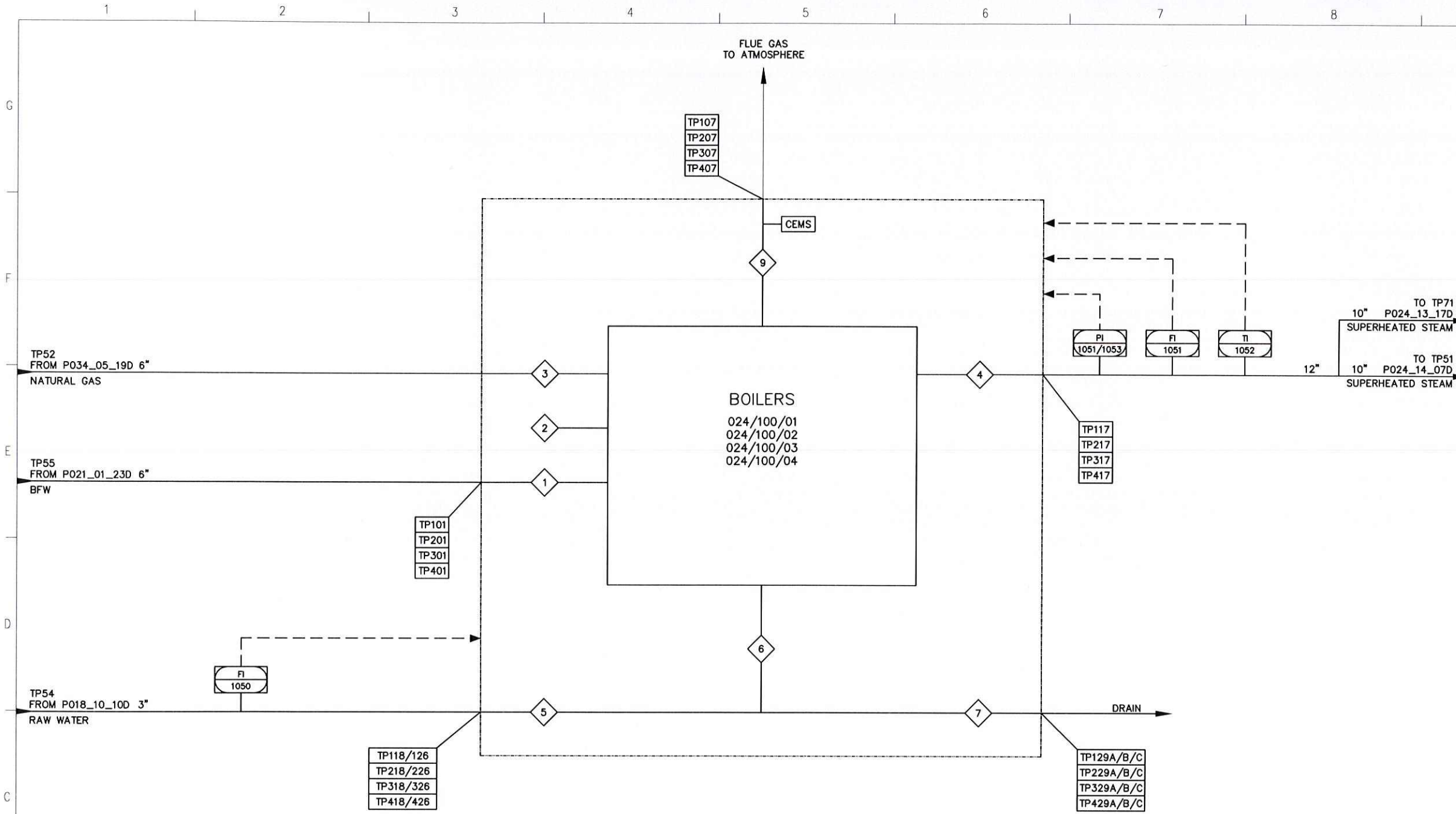
The information on this sheet may be used only for the purpose for which it is supplied by the company and must not be shown to third parties. The apparatus shown in the drawing may be covered by patents and/or may be background intellectual property of Wood. This sheet and all copies must be returned on demand.



TITLE:

PROCESS FLOW DIAGRAM
GREATHAM BOILER REPLACEMENT
NEW BOILER PACKAGES

DRN	DATE	CHK'D	DATE	APP'D	DATE	SCALE	NTS	A1
SITE	AREA	DRG.No	17202101-8110-20-0001	REV	01			



NOTES

1. MASS AND HEAT BALANCE DOES NOT ACCOUNT FOR FLUE GAS RECYCLE.

HOLDS.

1. HEAT AND MASS BALANCE TO BE CONFIRMED.

ITEM No.	024/100/01,02,03,04			
DESCRIPTION	PACKAGE BOILERS			
CAPACITY OR DIMENSIONS	PRODUCE 94tpd STEAM AT 24barg AND 260°C			
MATS OF CONSTN	TBC			
NUMBER OF	ON LINE	1 TO 4		
	STAND BY	1 TO 3		
	TOTAL	4		

STREAM No.	1	2	3	4	5	6	7	9	STREAM No.
COMPONENT FLOWS	BFW	COMBUSTION AIR	NAT GAS	SUPERHEATED STEAM	RAW WATER	BLOWDOWN	DRAINS	FLUE GAS	COMPONENT FLOWS
WATER	95410			94000	6348	1410	7758	11507	WATER
OXYGEN		21736						630	OXYGEN
NITROGEN		71546						71620	NITROGEN
NATURAL GAS			5740						NATURAL GAS
CO2								15259	CO2
NOx								6	NOx
TOTAL FLOW kg/h	95410	93282	5740	94000	6348	1410	7758	99021	TOTAL FLOW kg/h
TOTAL FLOW m ³ /h	99.39	77734.67	2391.55	8392.86	6.35	1.69	7.85	124180	TOTAL FLOW m ³ /h
TEMPERATURE DegC	100	10	10	260	10	224	50	152	TEMPERATURE DegC
DENSITY kg/m ³	960	1.2	2.4	11.2	1000	835	988	0.7	DENSITY kg/m ³
PRESSURE bar g	35	0	2	24	4.8	24	0	0 (TBC)	PRESSURE bar g
ENTHALPY kJ/kg	421.7	283.5	51505	2907	42.6	962	209	174.5	ENTHALPY kJ/kg
TOTAL HEAT FLOW kW	11176	7346	82118	75905	75	377	450	4800	TOTAL HEAT FLOW kW
COMMENTS	AT 105°C FROM DEAERATOR, COOLS TO 100°C AT TP		ENTHALPY BASED ON 40.38MJ/sm ³					PRESSURE ASSUMED	COMMENTS

01	17.10.18	PRELIMINARY	AR	AW	AW
REV	DATE	DESCRIPTION	DR'N	CHK'D	APP'D



PROJECT No. 17202101

The information on this sheet may be used only for the purpose for which it is supplied by the company and must not be shown to third parties. The apparatus shown in the drawing may be covered by patents and/or may be background intellectual property of Wood. This sheet and all copies must be returned on demand.



TITLE:

PROCESS FLOW DIAGRAM
GREATHAM BOILER REPLACEMENT
NEW BOILER PACKAGES

DRN	CHK'D	APP'D	SCALE	NTS	A1
DATE	DATE	DATE			
SITE	AREA	DRG.No			REV
		17202101-8110-20-0001			01