

Combustion Performance Worksheet

Excel

STATION:
 BOILER #: XXX
 SAMPLE DATE: x
 COMPANY NAME: Pitt #8
 MINE NAME: Pitt #8



COAL ANALYSIS

AS REC'D	DRY				
BTU/# = 13000	13867	SILICA = 47.00	IT RED = 2200	B/A RATIO = 0.34	
VOLATILE = 0.00	0.00	ALUMINA = 23.10	ST RED = 2325	SLAG INDEX = 0.91	
FIX CARBON = 0.00	0.00	TITANIUM = 1.07	HT RED = 2390	FOUL INDEX = 0.21	
MOISTURE = 6.25	0.00	IRON = 18.26	FT RED = 2510	SILICA % = 67.88	
ASH = 8.30	8.85	CALCIUM = 3.98	IT OXD = 2425	Fe:Ca = 4.59	
SULFUR = 2.50	2.67	MAGNESIA = 0.00	ST OXD = 2525	Fe:Ca+Mg = 4.59	
CARBON = 76.00	81.07	POTASSIUM = 1.39	HT OXD = 2600	DOLOMITE % = 16.41	
HYDROGEN = 5.05	5.39	SODIUM = 0.63	FT OXD = 2700+	ALKALI-COAL = 0.13	
NITROGEN = 1.47	1.57	SULFUR TRI = 3.19	LBS Fe2O3/MBtu= 1.166		
CHLORINE = 0.09	0.10	PHOS PENT = 0.32	LBS CaO/MBtu= 0.254	SLAGGING = MEDIUM	
OXYGEN = 0.34	0.36	UNDETER = 1.06	LBS Na2O/MBtu= 0.040	FOULING = MEDIUM	
PROX SUM = 14.55	8.85	OXYGEN/NITROGEN = 0.2	HGI = 55	TYPE ASH = BITUMINOUS	
ULTIM SUM = 100.00	100.00	SPONTANEOUS COMBUSTION POTENTIAL = MSHT	137	LOW	

BOILER PARAMETERS

UNIT = X	DULONG BTU = 14261	FLUE GAS % BY VOLUME:	PULVERIZER DESIGN SPECS. FOR
AH AIR IN = 100	B-W T250 = 2463	% H2O = 8.38	CAPACITY FACTOR OF 1:
AH AIR OUT = 500	W-F T250 = 2506	% CO2 = 14.19	HGI = 47
	N-R T250 = 2487	% SO2 = 0.17	% PASS 200 = 70 %
GAS OUT = 300	N-R T500 = 2391	% N2 = 74.40	BTU/lb. = 11300
% O2 = 3	N-R T1000 = 2305	% O2 = 2.86	
% LOI = 0	N-R T5000 = 2139		ACTUAL SPECS.
% FLY ASH = 80	N-R T10000 = 2079	THEO AIR LB/10KBTU = 7.98	HGI = 55
% FUDGE = 2.4	Tcv = 2232	TOT AIR LB/10KBTU = 9.31	% PASS 200 = 70 %
	FUSION FT-IT = 310	FLUE GAS LB/10KBTU = 10.02	BTU/lb. = 13000
	% QUARTZ(DRY) = 1.09	BOILER EFF = 88.5	CAP. FACTOR = 1.23
	LBS QUARTZ/MBTU = 0.788	LOWER HEAT VALUE = 12465.784	

EMISSION PARAMETERS

PRECIP TEMP = 300	RESISTIVITY: VOL	NaDEP	SO2/MBTU @ 100% = 3.85
EPA LIMIT = 0.1	5.0E+11	NA	#ASH/MBTU = 6.38
PRECIP KV/CM = 3	5PPM SO3 = 1.7E+11	NA	SO3 PPM = 15
REQ ESP EFF = 98.04	10PPM SO3 = 7.3E+09	NA	LB NITRO/MBTU = 1.13
	15PPM SO3 = 2.1E+08	NA	FC/VOLATILE= #DIV/0!
	20PPM SO3 = 6.2E+06	NA	CARBON/HYDRO = 15.05