

APPENDIX E.

ANALYSES OF NEW ZEALAND GASES

Coal-gas.

No. (1), Wellington coal-gas, analysed 16/11/17 ; No. (2), Wellington coal-gas, analysed 17/11/17 ;
 No. (3), Wellington coal-gas, analysed 28/11/17 ; No. (4), Auckland coal-gas, analysed 20/11/17 ;
 No. (5), Christchurch coal-gas, analysed 19/11/17 ; No. (6), Dunedin coal-gas, analysed 26/11/17.

ANALYSES.							
		(1.)	(2.)	(3.)	(4.)	(5.)	(6.)
Carbon dioxide (CO ₂)	..	3.77	3.38	3.08	4.24	3.80	3.09
Unsaturated hydrocarbons	..	3.51	3.38	3.57	3.50	3.30	3.33
Oxygen (O)	..	1.76	1.25	1.47	1.37	0.90	1.85
Carbon monoxide (CO)	..	9.41	9.37	8.50	10.84	13.80	7.77
Methane (CH ₄)	..	22.26	23.51	24.27	25.00	24.50	27.27
Hydrogen (H)	..	38.46	39.11	40.14	42.57	42.00	36.07
Nitrogen (N)	..	20.83	20.00	18.97	12.48	11.70	20.62
		100.00	100.00	100.00	100.00	100.00	100.00
Percentage of incombustible gas	..	26.36	24.63	23.52	18.09	16.40	25.56
Calories per cub. ft. (gross) measured at 60° F. and 30 in. pressure	..	116.52	119.43	122.62	127.96	127.46	124.91
British thermal units per cub. ft. (gross)	..	462.60	474.14	486.80	508.00	506.01	495.89

ANALYSES OF BRITISH GASES.

(1) Coal-gas supplied by a metropolitan company ; (2) mixed gas supplied in the metropolis
 (3) gas from Glover West vertical retorts.

ANALYSES.							
					(1.)	(2.)	(3.)
Carbon dioxide (CO ₂)	..	..	..	..	1.48	1.51	1.00
Unsaturated hydrocarbons	..	..	..	..	3.39	5.07	2.85
Oxygen	..	..	..	..	0.26	0.53	0.05
Carbon monoxide	..	..	..	..	8.17	13.31	8.70
Methane	..	..	..	..	31.22	26.17	29.05
Hydrogen	..	..	..	..	49.21	43.62	54.70
					100.00	100.00	99.55
Percentage of incombustible gas	..	..	..	..	8.01	11.83	4.25
Calories per cub. ft. (gross) calculated from analysis	..	..	..	..	146.39	143.08	142.62
Calories per cub. ft. (gross), from calorimeter	..	..	..	..	144.50	143.50	144.30
Calories per cub. ft. (net), from calorimeter	..	..	..	..	129.50	127.90	129.60
British thermal units per cub. ft. (gross), from calorimeter	..	..	..	..	573.60	569.70	572.90
British thermal units per cub. ft. (net), from calorimeter	..	..	..	..	514.10	507.80	514.50