

TABLE V

PERFORMANCE OF WINKLER GENERATORS MAKING POWER GAS

Plant		Louna	-	-
Reference		10	9	9
		(12 months av.)		
Actual output, N m ³ /hr.		50,000	-	-
<u>Fuel</u>		<u>DRY BROWN COAL</u>	<u>DRY BROWN COAL</u>	<u>GRUDE</u>
Analysis	C	57.8	61.1	70.7
on dry basis	H	4.3	4.7	2.7
	O	16.5	16.3	4.0
	N	0.6	0.8	0.0
	S	3.3	3.3	0.6
	Ash	17.5	13.8	22
	H ₂ O	(8.5)	(8.7)	(6.4)
Cal. val. T.cals/T net				
as received		5190	5270	5700
<u>Gas Analysis</u>	CO ₂	9.8	7.7	4.3
	CO	21.7	22.5	32.7
	H ₂	11.7	12.6	7.6
	CH ₄	0.7	0.7	0.5
	N ₂	55.3	55.7	54.6
	H ₂ S	0.8	0.8	0.3
Cal.val. k.cals/N m ³		984	1020	1140
Blast above fuel bed		25%	-	-
Fuel bed temp.		950°C	-	-
Gas exit temp.		1000°C	-	-
Dust content of gases			-	-
in g/N m ³ dry gas				
(a) before dust removal		65	-	-
(b) after primary dust rem.		-	-	-
(c) after final dust rem.		-	-	-
% C in dust		33-55	-	-
% C in ash		34-44	-	-
<u>Efficiencies /1,000 l³ gas</u>				
fuel	kgs	330	ca 330	ca 285
carbon	kgs	176	ca 186	ca 190
air	l ³	700	ca 720	ca 720
CO ₂	l ³	25	-	-
steam raised	kgs	450	-	-
Carbon utilisation	%	83	ca 82	ca 97*
dust blown over	kgs	65	-	-
grate ashes	kgs	18	-	-

*This appears very high and is probably in error: the fuel consumptions should be greater than shown.