

Report AVI

60476341 102

Cardiff – EfW performance test

Annex 4

Cardiff GPT --- T2S ---- LINE 1 ---- 09 03 2016 [11:15-13:15] ---- 100 %				
Denomination	Value	Unit	Comment	
T2 (upper)	924	°C	AVI	
T1 (Lower)	996	°C	AVI	
Delta L 1,2	7.6	m		
Delta L 2,Up	1.47	m		
Delta L <sub>SA</sub> ,1	6.46	m		
A	46.35	m²		
Delta T1,2	72	°C		
LHV	8.56	MJ/kg	DCS	
Qw	7.71	kg/s	DCS	
Qap	68647	Nm³/h	DCS	
Qap	24.6	kg/s	DCS	
Tap	150	°C	DCS	
Qas	38188	Nm³/h	DCS	
Qas	13.7	kg/s	DCS	
Tas	143	°C	DCS	
Qf	46.30	kg/s		
Qf	133349	Nm³/h	DCS	
Qf	37.04	Nm³/s		
Cpf	1200	J/Kg*K		
Cps	0.0012	MJ/Kg*K		
Cpa	1004	J/Kg*K		
Cpa	0.001004	MJ/Kg*K		
VFG1	4.14	m/s		
VFG2	3.61	m/s		
Delta I SA,2V FG1	1.56	s	< 2s	
H'	1.59	m		
TSA	1289	°C		
Tup	910	°C	DCS's value : 889°C	
H2S	8.05	m		
T2S	981	°C	DCS's value : 1026°C	

	Left (°C)	Right (°C)
Lup	Roof	
Lvl 2	Upper	958890
Lvl 1	Lower	1032960
Lvl SA	Secondary air	

Calculation in accordance with the document 4702 11 03 / 65   0003-A		
O2	5.96 %wet	
Qsteam	82083 kg/h	
NCV took into account : 8700 kJ/kg		
a1	-9.40E-02	c-3.73E-02
a2	-3.78E-06	d8.16E-06
a3	1.16E+00	e2.80E-05
a4	1.19E-05	f8.94E-01
a5	9.02E+00	
C1	1.00E+01	
C2	2.89E-01	
H2S =	6.96 m	
T2s =	993 °C	

Cardiff GPT --- T2S ---- LINE 1 ---- 23 03 2016 [12:11-14:11] ---- 60 %				
Denomination	Value	Unit	Comment	
T2 (upper)	849	°C	AVI	
T1 (Lower)	877	°C	AVI	
Delta L 1,2	7.6	m		
Delta L 2,Up	1.47	m		
Delta L <sub>SA</sub> ,1	6.46	m		
A	46.35	m²		
Delta T1,2	28	°C		
LHV	10.32	MJ/kg	DCS	
Qw	4.10	kg/s	DCS	
Qap	29247	Nm³/h	DCS	
Qap	10.5	kg/s	DCS	
Tap	158	°C	DCS	
Qas	25421	Nm³/h	DCS	
Qas	9.1	kg/s	DCS	
Tas	142	°C	DCS	
Qf	25.52	kg/s		
Qf	73507	Nm³/h	DCS	
Qf	20.42	Nm³/s		
Cpf	1200	J/Kg*K		
Cps	0.0012	MJ/Kg*K		
Cpa	1004	J/Kg*K		
Cpa	0.001004	MJ/Kg*K		
VFG1	2.34	m/s		
VFG2	1.83	m/s		
Delta I SA,2V FG1	2.76	s	> 2s	
H'		m		
TSA	1477	°C		
Tup	844	°C	DCS's value : 804°C	
H2S	4.68	m		
T2S	1042	°C	DCS's value : 990°C	

Lup	Roof	Left (°C)	Right (°C)
Lvl 2	Upper	862	836
Lvl 1	Lower	953	801
Lvl SA	Secondary air		

Calculation in accordance with the document 4702 11 03 / 65   0003-A			
O2	6.14 %wet		
Qsteam	49902 kg/h		
NCV took into account : 10 030 kJ/kg			
a1	-1.07E-01	c	-5.09E-02
a2	-3.21E-06	d	7.77E-06
a3	1.28E+00	e	2.65E-05
a4	1.49E-05	f	1.04E+00
a5	9.26E+00		
C1	1.00E+01		
C2	4.63E-01		
H2S =	4.43 m		
T2s =	980 °C		

Cardiff GPT --- T2S ---- LINE 2 ---- 16 02 2016 [13:50-15:50] ---- 100 %				
Denomination	Value	Unit	Comment	
T2 (upper)	916	°C	AVI	
T1 (Lower)	1026	°C	AVI	
Delta L 1,2	7.6	m		
Delta L 2,Up	1.47	m		
Delta L <sub>SA</sub> ,1	6.46	m		
A	46.35	m²		
Delta T1,2	110	°C		
LHV	9.09	MJ/kg	DCS	
Qw	7.08	kg/s	DCS	
Qap	65005	Nm³/h	DCS	
Qap	23.3	kg/s	DCS	
Tap	144	°C	DCS	
Qas	39577	Nm³/h	DCS	
Qas	14.2	kg/s	DCS	
Tas	141.0	°C	DCS	
Qf	46.90	kg/s		
Qf	135085	Nm³/h	DCS	
Qf	37.52	Nm³/s		
Cpf	1200	J/Kg*K		
Cps	0.0012	MJ/Kg*K		
Cpa	1004	J/Kg*K		
Cpa	0.001004	MJ/Kg*K		
VFG1	4.17	m/s		
VFG2	3.69	m/s		
Delta I SA,2/V FG1	1.55	s	< 2s	
H'	1.66	m		
TSA	1240	°C		
Tup	895	°C	DCS's value : 887 °C	
H2S	8.12	m		
T2S	1002	°C	DCS's value : 1029 °C	

Lup	Roof	Left (°C)	Right (°C)
Lvl 2	Upper	915	917
Lvl 1	Lower	1041	1010
Lvl SA	Secondary air		

Calculation in accordance with the document 4702 11 03 / 65   0003-A			
O2	5.82 %wet		
Qsteam	81763.77 kg/h		
NCV took into account : 10030 kJ/kg			
a1	-1.07E-01	c	-5.09E-02
a2	-3.21E-06	d	7.77E-06
a3	1.28E+00	e	2.65E-05
a4	1.49E-05	f	1.04E+00
a5	9.26E+00		
C1	1.05E+01		
C2	3.94E-01		
H2S =	6,61 m		
T2s =	992 °C		

Cardiff GPT --- T2S ---- LINE 2 ---- 17 02 2016 [13:00 - 15:00] ---- 60 %				
Denomination	Value	Unit	Comment	
T2 (upper)	819	°C	AVI	
T1 (Lower)	852	°C	AVI	
Delta L 1,2	7.6	m		
Delta L 2,Up	1.47	m		
Delta L <sub>SAV</sub> 1	6.46	m		
A	46.35	m²		
Delta T1,2	33	°C		
LHV	8.59	MJ/kg	DCS	
Qw	4.43	kg/s	DCS	
Qap	33396	Nm³/h	DCS	
Qap	11.9	kg/s	DCS	
Tap	157	°C	DCS	
Qas	25152	Nm³/h	DCS	
Qas	9.0	kg/s	DCS	
Tas	141	°C	DCS	
Qf	27.83	kg/s		
Qf	80159	Nm³/h	DCS	
Qf	22.27	Nm³/s		
Cpf	1200	J/Kg*K		
Cps	0.0012	MJ/Kg*K		
Cpa	1004	J/Kg*K		
Cpa	0.001004	MJ/Kg*K		
VFG1	2.32	m/s		
VFG2	1.95	m/s		
Delta I SA,2/V FG1	2.79	s	> 2s	
H'		m		
TSA	1234	°C		
Tup	813	°C	DCS's value : 800 °C	
H2S	4.63	m		
T2S	960	°C	DCS's value : 989 °C	

Lup	Roof	Left (°C)	Right (°C)
Lvl 2	Upper	837	801
Lvl 1	Lower	849	854
Lvl SA	Secondary air		

Calculation in accordance with the document 4262 11 63 / 65   0003-B			
O2	6.05	%wet	
Qsteam	48786	kg/h	
NCV took into account		8 700 kJ/kg	
a1	-9,40E-02	c	-3,73E-02
a2	-3,78E-06	d	8,16E-06
a3	1,16E+00	e	2,80E-05
a4	1,19E-05	f	8,94E-01
a5	9,02E+00		
C1	9,60E+00		
C2	4,07E-01		
H2S =		4,44 m	
T2s =		940 °C	