



**LEGEND**

xx Stream number

CWR Cooling Water Return  
 CWS Cooling Water Supply  
 WW Waste Water

	21	22	23	24	25	26	27	28	29	31	32	33
Composition	Syngas	Syngas	Syngas	Syngas	Syngas	Syngas	Condensate	Syngas	Tailgas	Steam	Water	Steam
Hydrogen - H2	mole frac. 0.42	0.42	0.25	0.37	0.43	0.53	0.00	1.00	0.18	0.00	0.00	0.00
Carbon monoxide - CO	mole frac. 0.36	0.36	0.21	0.09	0.04	0.05	0.00	0.00	0.08	0.00	0.00	0.00
Carbon dioxide - CO2	mole frac. 0.12	0.12	0.07	0.19	0.25	0.31	0.00	0.00	0.53	0.00	0.00	0.00
Methane - CH4	mole frac. 0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water - H2O	mole frac. 0.03	0.03	0.43	0.31	0.25	0.04	1.00	0.00	0.13	1.00	1.00	1.00
Nitrogen - N2	mole frac. 0.06	0.06	0.04	0.04	0.04	0.07	0.00	0.00	0.08	0.00	0.00	0.00
H2S	mg/ Nm3 25	25	0.02	0.02	0.02	0.02	0	0	0	0	0	0
COS	mg/ Nm3 150	150										
HCl	mg/ Nm3 2	2	0.05	0.05	0.05	0.05	0	0	0	0	0	0
Mole Flow - Total	kmol/h 710	689	1199	1199	1199	969	230	409	560	322	189	511
Mass Flow - Total	ton/h 13.2	12.8	22.0	22.0	22.0	17.9	4.1	0.8	16.9	5.8	3.4	9.2
Normalized volumetric flow	Nm3/h 15917	15450	26880	26880	26880	21719	4.1	9173	12546	513	3.4	814
Actual volumetric flow	m3/h 15573	1307	2365	2947	2947	1097	4.1	484	11217	513	3.4	814
Density gas	kg/m3 0.85	13.5	9.3	7.5	7.5	16.3	1.7	1.5	11.3	11.3	18.02	9.5
MW average	kg/kmol 18.62	18.63	18.36	18.37	18.37	18.45	18.02	2.02	30.13	18.02	18.02	18.02

Rev.	Date	Description/ Issued for	Drawn by	Ckd	Seen by
0	2-Apr-2010	For comment	FBHR		JKH
Client		Darwin Business Partners B.V.			
Project		H2GREEN			
Title		<p>Process Flow Diagram</p> <p>Syngas upgrade section</p>			
Office	Dept.	Scale	Size	Ordernumber	Sub
T101	331				
Drawing number		Sht   of		Rev	
3142001					