Table I. Initial conditions in hydrogen plant

Date	26.1.2012
Temperature of the reformer, °C	798
Temperature of the shift reactor, °C	335
S/C ratio, -	3.0
Consumption of natural gas as raw material, kg/h	1529
Production of steam, kg/h	4600
Consumption of process steam, kg/h	4599
Production of hydrogen Nm^3/h	5476

Table II. Gas analysis results in initial conditions 26.1.2012

Date		26.1.2012 7:15
H_2 in complete product	ppm	99.62
N_2 in complete product	ppm	0.00
CO in complete product	ppm	0.25
CH_4 in complete product	ppm	0.08
CO_2 in complete product	ppm	0.05
After reformer % H_2	%	71.6
After reformer % N_2	%	0.5
After reformer % CO	%	13.3
After reformer % CH_4	%	5.7
After reformer % CO_2	%	8.9
Before PSA % H_2	%	74.8
Before PSA % N_2	%	0.2
Before PSA % CO	%	3.5
Before PSA % CH_4	%	5.2
Before PSA % CO_2	%	16.3

Table III. Test conditions

Date	Parameter changes
Tuesday 31.1.2012 klo 9.00	Decreasing of the reformer outlet temperature (TI-6701.2) by 5 degrees (798 C --> 793 C)
Wednesday 1.2.2012 klo 9.00	Returning the reformer outlet temperature (TI-6701.2) to the original (800 C) Decreasing the shift conversion inlet temperature (TIC-6709) by 10 degrees (335 --> 325).
Thursday 2.2.2012 klo 9.00	Returning shift conversion inlet temperature (TIC-6709) to the original (335 C)
Sunday 5.2.2012 klo 9.00	Increasing the shift conversion inlet temperature (TIC-6709) by 10 degrees (335 --> 345)
Monday 6.2.2012 klo 9.00	Returning shift conversion inlet temperature (TIC-6709) to the original (335 C) Decreasing steam/carbon ratio by 0,1 (3.0 -> 2.9)
Tuesday 7.2.2012 klo 9.00	Decreasing steam/carbon ratio by 0,1 (2.9 -> 2.8)
Wednesday 8.2.2012 klo 9.00	Increasing steam/carbon ratio by 0,3 (2.8 -> 3.1)
Thursday 9.2.2012 klo 9.00	Increasing steam/carbon ratio by 0,1 (3.1 -> 3.2)
Friday 10.2. 2012 klo 9.00	Returning steam/carbon ratio to original (3.0)