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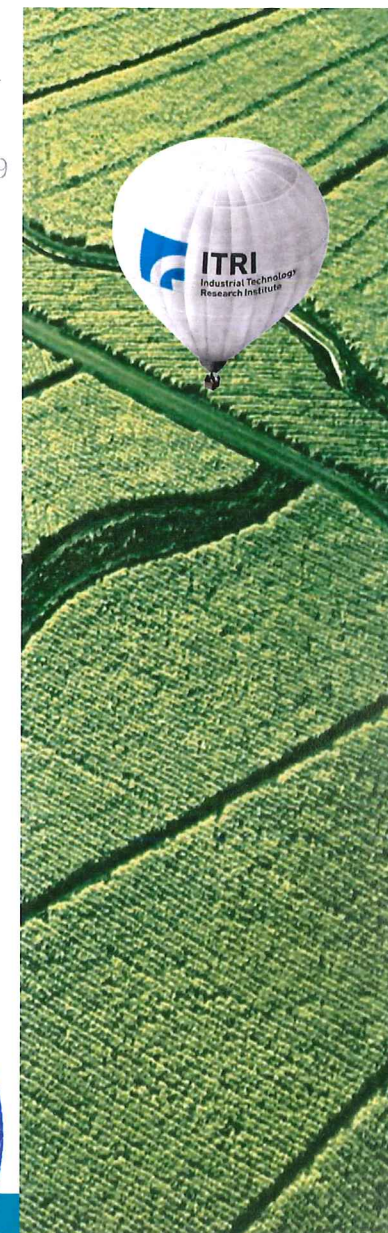
技資編號:07-3-B3-0039

Hydrogen Flow Rate Measurement Technology Services

Gas Chemistry and Clean Environment Metrology Laboratory

Yu-Jie, Sun

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Information

■ Hydrogen flow rate measurement technical services

- **Test sample:**

Hhuhu H2 Generator SE500 (SN : AW-T2131005)

- **Test content:**

Hydrogen flow rate of generator

- **Applicant:**

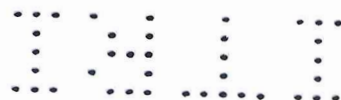
Hydrogen Breathing Century Intl Co., LTD.

- **Services No.:**

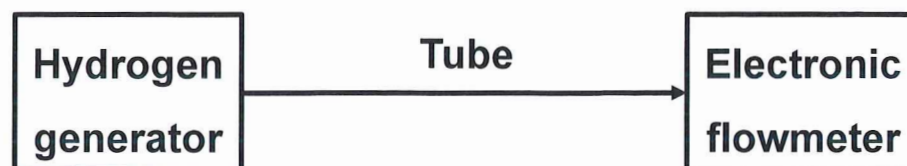
G4-11207C03823

- **Test system:**

Electronic flowmeter (Restek)



The hydrogen flow rate measuring process and schematic diagram



■ Test procedure:

- Power on the hydrogen generator, press start and wait 2 hours for equilibrating.
- Connect the tube from hydrogen generator to electronic flowmeter.
- Power on the electronic flowmeter then record the flow rate every 0.5 minutes.

Test results – Hydrogen gas flow rate measurement test results

No.	Flow	No.	Flow	No.	Flow	No.	Flow	Test results	
1.	527.33	11.	522.62	21.	527.89	31.	535.49	Average(mL/min)	532.08
2.	530.98	12.	530.47	22.	538.75	32.	535.62	SD	3.89
3.	530.62	13.	532.96	23.	531.59	33.	531.29	RSD(%)	0.73%
4.	530.63	14.	529.41	24.	540.39	34.	537.83		
5.	530.05	15.	527.53	25.	530.58	35.	538.73		
6.	528.13	16.	532.62	26.	531.76	36.	538.73		
7.	531.28	17.	535.36	27.	533.91	37.	537.14		
8.	527.59	18.	531.34	28.	533.96	38.	530.29		
9.	529.24	19.	529.90	29.	531.57	39.	531.28		
10.	527.21	20.	533.82	30.	529.97	40.	537.51		

Laboratory environmental conditions: temperature $23 \pm 2^{\circ}\text{C}$, humidity $40 \pm 10\%$



Conclusions

- The Center for Measurement Standards at Industrial Technology Research Institute (CMS-ITRI) was commissioned by Hydrogen Breathing Century Intl Co., LTD. for measurement technology services of hydrogen generator flow rate.
- Electronic flowmeter was used to measure flow rate of generated gas from hydrogen gas generator, the measurement results is showed in Test results.



Appendix – Hydrogen generator photo

