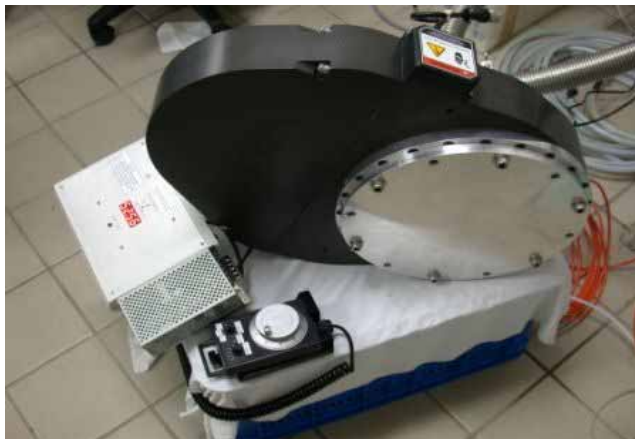




## VAT Pendulum Isolation Valve Repair

- Repair details
- ◆ 1.Problem check : Function and leak test before repair
- ◆ 2.Disassembly & Check : Disassembly all of valve and check each components one by one
- ◆ 3.Clean , Replace damaged & all seals and bearings
- ◆ 4.Assembly
- ◆ 5.Leak Test : Vacuum leak , Isolation Leak and CDA Leak test
- ◆ 6.Function test : Control simulate verify and cycle test
- ◆ 7.Final check packing : heater test and packing



Leak Test



Control Simulator

Simulate Control & Cycle test



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## Pendulum Valve Components



**Valve Assembly**



**Body**



**Motor Assembly**



**Motor Assembly**



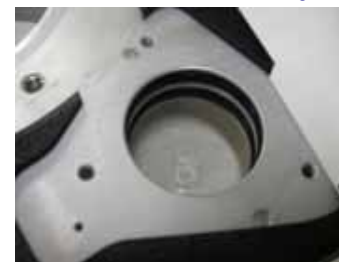
**Pendulum Unit**



**Control Board**



**Heater**



**Actuator Seals**



**Pendulum Plate**



**Isolation set**



**Pendulum Shaft**



**Close set**



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## Replace parts



Seal for Pendulum Shaft



Seal for Isolation Ring



Seal for Bonnet



Seal for Actuator



Bearing Set



Seal for Sealing Ring



Lift Seal for Sealing Ring



Replace Seals



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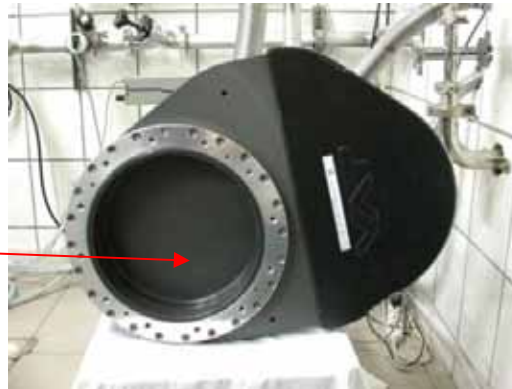
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## Full Leak Test after repair

Check if  
leak here



Isolation Leak Test



Open Leak test



Close Leak test



CDA Leak test





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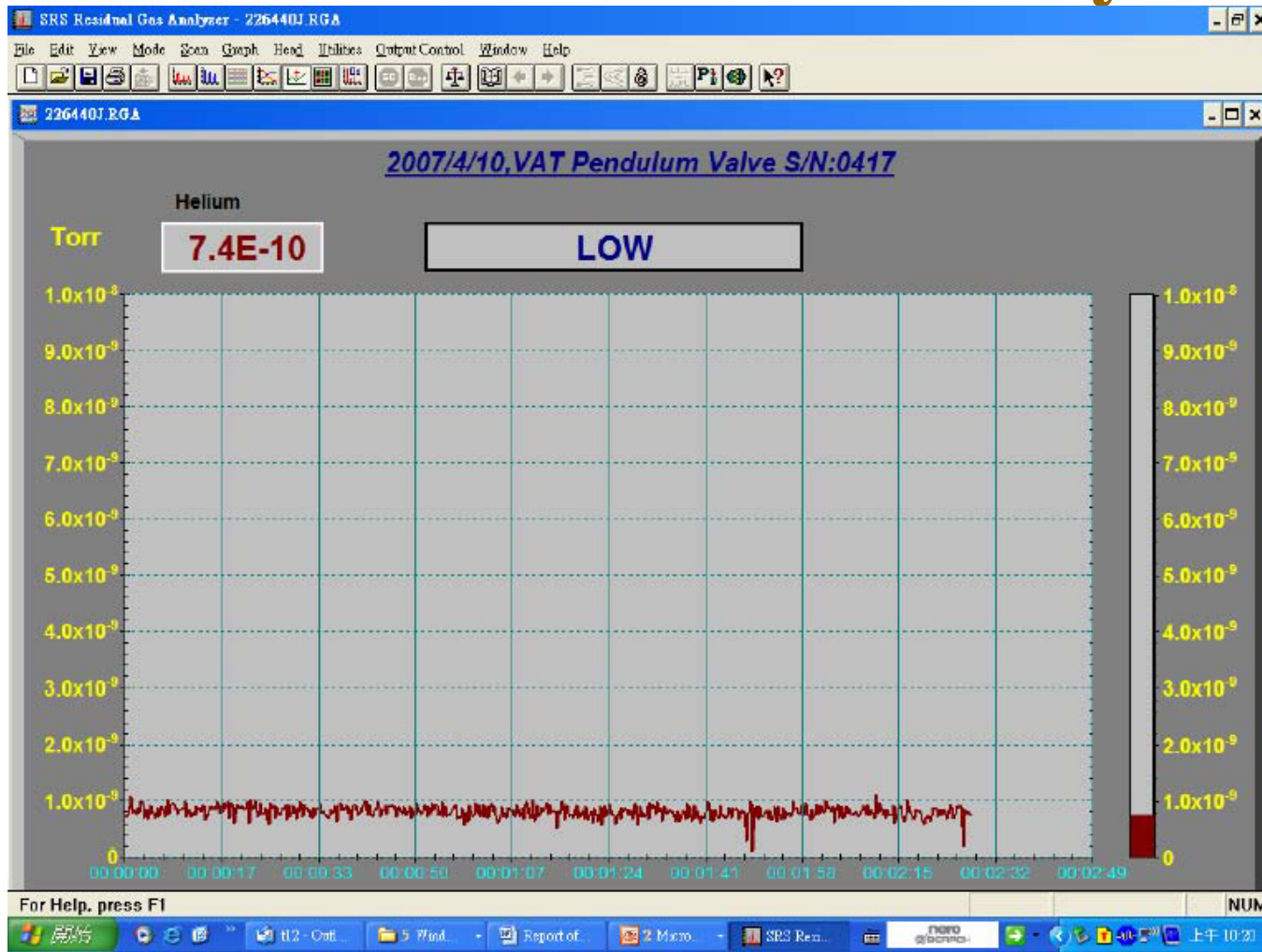
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## Result Of Leak Test By RGA





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## Text Report I

Description	VAT Pendulum Valve	入廠日期	2007/9/7
User		出廠日期	
P/N		S/N	0163
Item	Repair details	Action	Remark
1	Pendulum plate	clean	
2	Bonnet	clean	
3	Sealing Ring	replaced	
4	Valve body	clean	
5	Lift of sealing ring	clean	
6	Valve seat	clean	
7	Bearing of actuator(2 set)	replaced	
8	Bonnet seal	replaced	perfluoro,provide by user
9	Rotary feedthrough(2 ea)	replaced	
10	Seal of actuator(2 ea)	replaced	
11	Plate seal of sealing ring	replaced	perfluoro,provide by user
12	Body seal of sealing ring	replaced	perfluoro,provide by user
13	Lift seal of sealing ring(12 ea)	replaced	
Item	Function and Operation	Result	
1	Valve Open / Close cycle test 100 times	pass	
2	Heater & TC test	71.9 / 2.9 Ω	
3	Open/Close limit sensor test	OK	
4	Open angle test by local mode	OK	
5	Open/Close position check	1.53 / 70.65	
Item	Vacuum Leak Check	Result	
1	Vacuum Leak test (Torr-Liter/sec)	-3.7E-09	
2	Vacuum Leak test inner gas (Torr-Liter/sec)	-4.1E-09	
Item	OQC	Result	
1	Accessories check.	OK	
2	Final visual check	OK	
REMARK			



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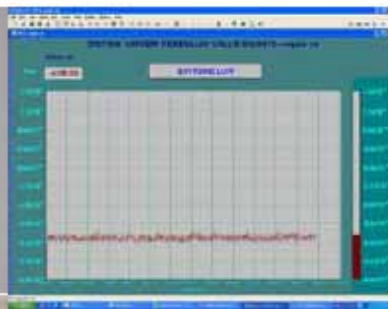
Tainan Office

Fax : 886-06-5013388

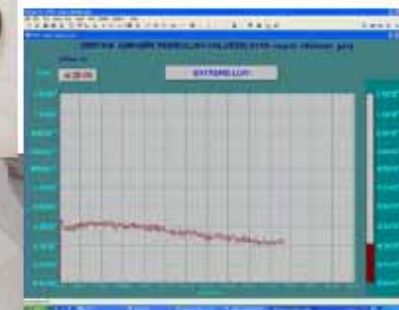
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## Text Report II



leak test(closed plate)



leak test (inner gas)

Engineer: VICC

Double check:

Supervisor: