Adv. Dr. Choi. 09/04/2009

STANDARD OPERATING PROCEDURES

(Daily Operations & Regeneration of Glove-Box)

Caution: An inert atmosphere must be established in the Glove-Box before starting regeneration. Less than 200PPM of oxygen is desired before the Glove-Box should begin purifier regeneration

Daily Operations:

Daily operation of the Glove-Box consists of two basic types of activity.

The first involves monitoring the gas cylinder to make sure there is always an adequate gas supply for each day's activities. Check the regulator settings as well. You should also monitor the glove box atmosphere for chemical purity.

The second type of daily activity involves controlling the position of the gloves in the glove box. Manual control requires the user to pay close attention of the pressure in the system. Automatic control frees the user from this task. Once the settings have been made on the SSG, the controller takes over on a continuous basis.

Regeneration:

For the regeneration of Glove-Box procedure follow the instructions up to the step 9.

- 1. Main power switch on, blower switch off, pressure control switch on and vacuum pump on.
- 2. Set SSG red lights on +2" and +1"
- 3. Check the regeneration gas to be a "K" size cylinder. A full cylinder should be about 2,400 PSIG about 240 Cu.Ft. Set the regulator pressure at about 10PSIG. The regeneration cycle is twelve hour.
- 4. Record the cylinder pressure before and after regeneration and record the amount of pressure drop. The drop should be about 500# to 600#.
- 5. Set the Regenerate/Circulate Switch to Regenerate. The Regenerate Light does not come on yet.
- 6. Press and hold the Purge Test Switch. Set Regeneration Gas Flow Rate (see above flow meter).
- 7. Hold this test for 60 seconds to assure that the flow rate does not drop. If it drops, it indicates a restriction in the Purge Vent Solenoid Valve of cylinder valve is closed of cylinder is empty. Release the Purge Test Switch.

- 8. Press the Regeneration Programmer Switch for two seconds and release it. The Regenerate Light and the Refill Light will come on. After approximately 3 minutes, the Heat Light will come on and regeneration will proceed automatically.
- 9. After regeneration is completed, when ready to resume circulation, reset Regenerate/Circulate Switch to circulate, and turn blower switch on,

Things to Remember During Operation:

- o During normal operation, leave the automatic pressure control switched on.
- Let the vacuum pump run continuously.
- Keep spare cylinders of gas near the Glove-Box for quick change over.
- Change oil in vacuum pump after each regeneration.