

Title:

Van de Graaff Accelerator

Rev No:

000

Issue Date:

31 Oct 2007

Page:

Page 1 of 2

Prepared by:
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Approved by:
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Review Date:
31 Oct 2007

1 Objective:

This Standard Operation Procedure states how Van de Graaff Accelerator should be started up and shutting down in a proper manner.

2 Responsibilities:

2.1 Director / HOD / PI

The Director/HOD/PI has overall responsibility for ensuring a system is established for the safe use of the accelerator.

2.2 Designated Person

There shall be a designated person to oversee the correct operation and maintenance of the accelerator.

a. This person shall periodically inspect the accelerator to ensure its operational performance.

b. He/She will arrange for the yearly safety certification by a competent person and keep a copy of the certification report for verification purposes.

c. He/she will make necessary arrangements for repair works of the accelerator.

d. He/she will report to the Director/HOD/PI unsafe practices by accelerator users.

2.3 Staff/ Research personnel

a. Accelerator users shall attend appropriate training on the safe use of the accelerator.

b. Users shall report any injuries, defects or breakdowns to their supervisor.

3 Procedures:

3.1 Starting up:

. Switch ON the Chill Water pump (the control box is mounted on the wall near the door).

. Make sure nobody is inside the room then slide the lead door and close the wooden door.

. On the control panel turn the Switch key to ON and press the Drive Motor ON button.

. Select GAS 1,2 or 3: usually no.1 is Hydrogen and it needs only 12 turns of the GAS CONTROL from minimum at the anti-clockwise position.

. At the VAN DE GRAAFF STABILIZER box the Belt charge OFF button will lit to indicate the charge can be switched to ON by pressing the Belt charge ON button.

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Page 2 of 2

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- . Carefully turn up the charge from zero to the desired terminal voltage - the value reads 3200 on GVM Reference and Column current 28 microAmp for 2 Mev.
- . The beam will strike after enough gas fills the ion source and be registered on the Beam Current meter.
- . Switch to GVM from Manual for a stabilized voltage.
- . Switch on the Magnet and set value for the selected beam.

3.2 Shutting Down

- . Press BELT CHARGE OFF button.
- . Turn charge back to zero and switch to Manual position.
- . Press Drive Motor Off button and then turn key to OFF.
- . Switch off water chiller pump.

The accelerator can be stopped immediately by turning the switch key to OFF in case of emergency.

4 Records:

- a. A copy of the yearly licensing must be kept in a file by the accelerator owner for verification purposes.

5 References:

Manuals kept on the shelves at S7-01-07 near accelerator's control panels.

6 Appendix:

Nil