

Group Number:	22		Submission Date:		
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Activity	Hazard	Who Might Be Harmed And How	Control Measures	Severity			Potential			Score (Severity x Potential) L=1, M=2, H=3	Result ¹
				L	M	H	L	M	H		
Charging the generator and other components in lab with high voltages	A short circuit to ground from one of the components may occur and hence dangerously high current will flow to the wrong place and will destroy circuit.	Individuals present in the lab during charging or when short circuit occurs	Automatic safe shutdown controls incorporated into the generator circuit to ensure current doesn't overload			3	1			3	A
Filling busbar with NOVIC 4710 gas	Colourless Gas replaces air, very toxic when inhaled and may cause frostbite if comes in contact with eyes or skin.	Anyone close to the busbar by inhaling the gas	Gas bursting disc allows release of gas to avoid busbar bursting. Very high ceiling ensures amount of gas minimal compared to the lab.	1				2		2	A
Placing resistors for generator at high heights and connecting wires between elevated points	Falling from significant height	Person replacing the resistors or wires by falling	Safety helmet required along with safety ropes to prevent falling	1				2		2	A
Walking around the lab	Tripping and Falling on hard surface.	Anyone in the lab by tripping	HV laboratories kept free of all obstructions and kept clean. Trailing leads are as short as possible, run flat on the floor	1			1			1	T
Checking the pressure level of busbar	Gas bursting disc fails at giving correct reading and explosion occurs	Everyone in the building	Multiple bursting discs fitted, all with high reliability and accuracy			3	1			3	A

¹ T=trivial risk (very low risk activities where the hazard is insignificant), A=adequately controlled and no further action required, N=not adequately controlled, actions required

RISK ASSESMENT

Using key to energize and deenergize room	If key is not held always by same person, others could energize the room while the room isn't empty	Anyone present in the room during energizing, harmed by electrocution	All individuals in the laboratories are aware of all experiments in progress			3	1			3	A
Entering room after deenergized	If not grounded, static electricity may seriously harm the person	Person entering room immediately after deenergizing, harmed by electrocution	All experiments safely always earthed down when not energised, verified by multiple personnel		2		1			2	T
Monitoring the voltage of the generator and other machines using voltage divider bushing	If bushing is faulty, voltage reading maybe false so voltage of components may be too large that they damage equipment	Individuals present during the monitoring process	Automatic safe shutdown controls incorporated into the test circuit control circuit		2			2		4	A
Walking below heavy weights suspended at high heights	Posts and wires holding the weights could be faulty and hence the weight could fall freely	Anyone walking directly below the heavy equipment	Wear helmets at all times, regular daily wire checks are made		2		1			2	T
Construction of voltage divider	Human mistake could short voltage divider to ground	Anyone available in the room, harmed by electrocution	Gas insulation available to forbid shorting to ground			3	1			3	A

We confirm that all group members participated in the production of this risk assessment: Yes / No