

**Department of Energy Science and Engineering [DESE]
Indian Institute of Technology Delhi**

Dr. Ramesh Narayanan
Associate Professor

Hauz Khas, New Delhi-110016.

Telephone: +91-11-2659-1250 (Office)
+91-11-2659-6531 / 6549 / 6461 (Lab)

Fax: +91-11-26581121

e-mail: rams@dese.iitd.ac.in
rams.dese.iitd@gmail.com

Date: July 09, 2022

To,

M/s Highness International
C-76, Sector-4,
Noida – 01301, Uttar
Pradesh

Sub.: Performance Certificate of Earth Grid of Marconite Concrete, installed in room V-139, IIT Delhi

Dear Sir,

With reference to our supply order dated March 20, 2017, M/s Highness International, Noida installed a earth grid of seven (7) numbers Marconite conductive concrete earth electrodes at Plasma lab, Room V-139, Indian Institute of Technology Delhi, of following specifications:-

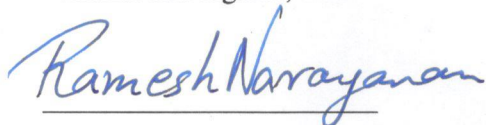
- ✓ Overall size of Marconite earth electrodes: Diameter 80 mm, Length 3000 mm each
- ✓ Metal conductor: Copper rod diameter 16 mm, Length 3000 mm each
- ✓ The Marconite earth electrodes are horizontally interconnected with copper strip size 40 mm x 3 mm at 600 mm below the surface level and embedded with Marconite concrete size 50 mm².
- ✓ Five risers were taken out from the subsoil grid to the surface and connected to the copper earth bus bar size 40 mm x 3 mm, fixed around the walls of the room at 150 mm above the surface level. EBB has been encased in plastic cable tray and has 38 points for connection.

This is to certify that the earth resistance measurement of the above earth grid was undertaken on July 08, 2022, which achieved resistance of value **0.32 ohms** against our desired value of < 0.5 ohms.

On behalf of the Plasma Lab, IIT Delhi, the undersigned acknowledges that the performance of the Marconite earth grid installed by M/s Highness International in Room V-139, IIT Delhi is not only satisfactory but has also improved specifications.

It is also informed that 'No watering or Maintenance or Re-charging of the Marconite earth grid was done during the last five years of use.

Thanks and regards,



Dr. Ramesh Narayanan
Associate Professor DESE