

E) Commissioning of new servers for Anunet DMZ:

Anunet setup in RRCAT is reconfigured by commissioning new Anunet DMZ firewall, mail and name servers for isolating Anunet servers from RRCAT intranet servers. Two name servers, serving "anunet.in" and other DAE units sub domains, have been setup to synchronize the name records with root level name server hosted at BARC. RRCAT related web services on Anunet can be accessed on any PC connected in any DAE unit, using the URL <http://www.rrcat.anunet.in>. Figure I.3.6, is a snapshot of the home page, displaying web services available in RRCAT, which are accessible over Anunet.



Figure I.3.6: Snapshot of home page, displaying services available in RRCAT, accessible over Anunet

F) RRCATNet Expansion and Upgradation:

Commissioning of one number of OFC (Optical Fibre Cable) segment, from Information Technology Building-B to MFL and UHV building is completed. This will provide redundant physical layer network connectivity to MFL, UHV and SCRF buildings.

Expansion of network was carried out in (i) Indus User Hall building, where one 24-port switch was upgraded to 48-port switch, (ii) in Indus-2 building, where one 24-port was upgraded to 48-port switch and (iii) in UHV and MFL buildings, where a new 24-port switch was installed. In addition to this, nine new network ports were added in various other buildings, as per the user requirements.

G) Expansion of communication network:

Total 89 numbers of new telephone connections were provided at various locations in RRCAT campus (SCLS building, Accelerator Magnet Technology Division Building, UHV Lab IMA assembly hall, Colony, ADL).

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I.4: Construction and Services

A) Making of Ultra High Vacuum and Magnet fabrication Lab Buildings:

Ultra High Vacuum and Magnet Fabrication Labs (UHV-MFL) have been designed and constructed as two RCC (Reinforced Cement Concrete) blocks, joined by a central utility wing, which facilitates common entrance & general utility services for both the labs. The MFL bldg., has a high bay of 14.4 meters height, with a provision for 50T capacity EOT (Electric Overhead Travelling) crane. RCC frame is constructed with stepped column to support crane girder. The crane girder is designed and fabricated using built up section for critical combination of loads, including, movement of maximum capacity load in lifted condition. The MFL bldg., had diverse building requirement of fabrication and testing. The fabrication lab necessitates workshop environment, whereas test lab required air conditioned environment with dust controlled finishes and foundation with vibration isolation. The diverse requirements have been met with proper planning. The test lab has been provided with removable hatch to enable mounting of heavy magnet on test bench using the EOT crane. After the erection of magnet on the test bench, hatch is covered for testing. Figure I.4.1 depicts the building plan of the UHV-MFL building.

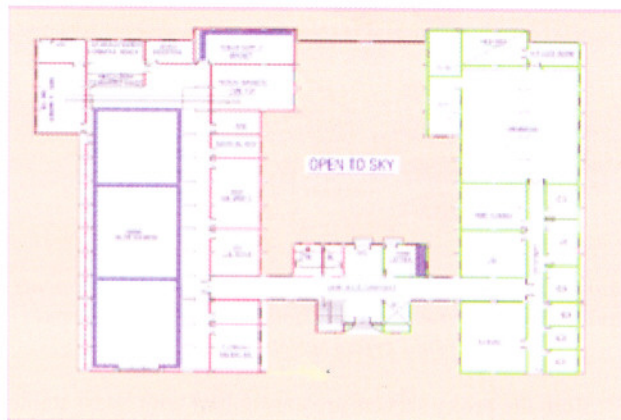


Figure I.4.1: Building Plan

The building has been erected on sloping terrain. In order to utilize the terrain, differential floor levels of the two labs have been joined by a connecting ramp in the corridor. Figure I.4.2 depicts a view of the UHV-MFL building on the sloping terrain.



Figure I.4.2: View of UHV –MFL Building

UHV lab bldg., has been planned keeping the functional requirements in view. The lab has a small workshop to enable fabrication which has been provided in front area of the building. This is followed by labs which require dust controlled area and at the end is a clean room, which has been provided to enable testing of vacuum components. The graded zone planning helps in maintaining dust controlled environment.



Figure I.4.3: Interior view of UHV -Lab

Special features of UHV-MFL building are:-

- High bay of 14.5 meters height which houses 50 MT capacity EOT cranes in MFL bldg., for material lifting.
- 2mm thick epoxy floor in UHV assembly hall and magnet testing lab.

- 2mm thick ACP (Aluminium Composite Metal) sheet masking on AC (Air Conditioning) duct and false ceiling.
- 2mm thick PVC (Poly Vinyl Chloride) & Antistatic floor in labs.
- 50mm thick Heavy duty epoxy based floor in Hall.

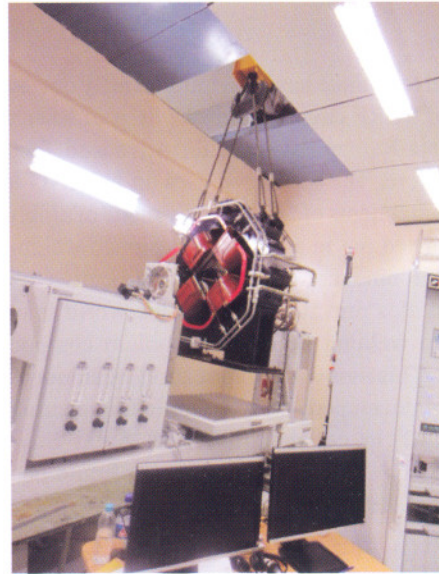


Figure I.4.4: View of Magnet erection in testing lab. of MFL

AC ducts in the clean room have been provided with masking, made up of ACP, which, apart from providing smooth finishes, enhance the aesthetic appearance. The floor has been provided with self leveling epoxy coatings as per requirements of desired clean room environment.

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