



LEXUS: LSM + LTM

Architectural Design for a Factory and Office Building

Client:	Mr. Janak Mistry
Site Location:	Icchapore, Hazira, Surat
Plot Size:	1,07,640 sq ft
Construction Area:	85,000 sq ft / 9,445 sq m
Cost of Project:	Confidential
Year of Completion:	2016
Services:	Architectural Planning, Interior Design, Landscape Design, MEP Integration
Firms Involved:	EssTeam



THE PROJECT:

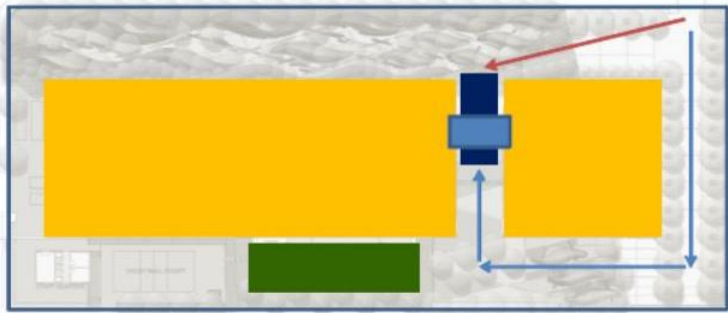
The premise consists of two factories – one for Lemon Technomist and one for Lexus Softmac. The two form finished concrete blocks are separated by a yellow Indian sandstone clad reception block. The screen to cut down on the direct sunlight and provide security is designed so as to generate the Moire effect as one moves around the building. The common canteen facilities sits behind the building along a vast pool of Lilies.



THE SITE:

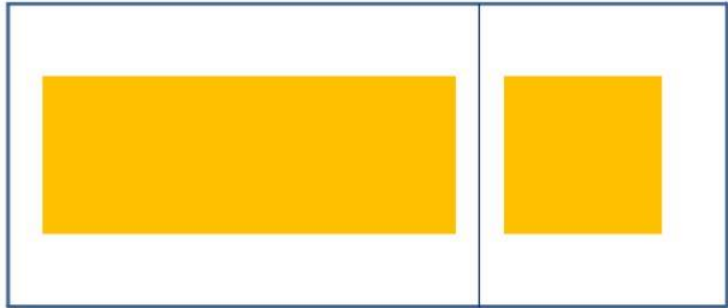
The site is a huge plot in Icchapore, Surat which is surrounded by a lot of important industries and efficient buildings.





MAKING MACHINES

MAKING DIAMONDS



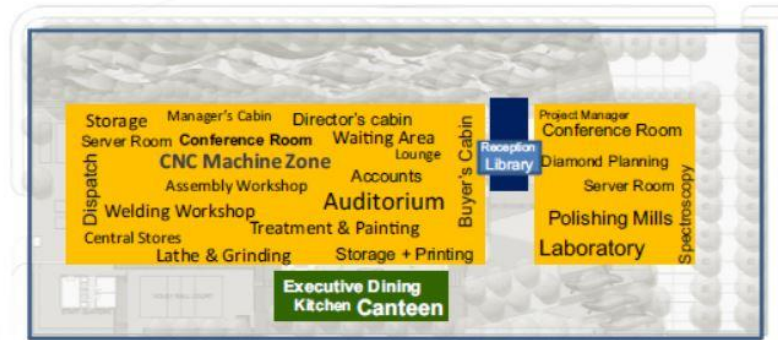
MAKING MACHINES

MAKING DIAMONDS

Located in an Industrial Park not far from the city, this new Factory cum Office building for an enterprising diamond processing company came as an opportunity to put into practice, a lot of our design convictions related to architecture and design philosophies that we had been carrying out since our college days. The client, three brothers, all engineers in different faculties, aspired to create a state of the art infrastructure for diamond processing and manufacturing of high end and ultra-high-tech diamond process related machines. Logically, these two major functions needed two buildings. The buildings were moved apart to create some space in-between to incorporate the main entry to both the buildings. The buildings are connected with a bridge on the upper level which becomes the library and informal gathering space for the directors.

Design Values:

- Minimalistic approach
- Engineering Innovations
- High functionality, serviceability
- Supreme Cost and Energy consciousness

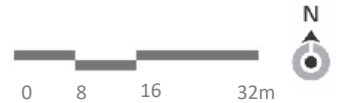


MAKING MACHINES

MAKING DIAMONDS

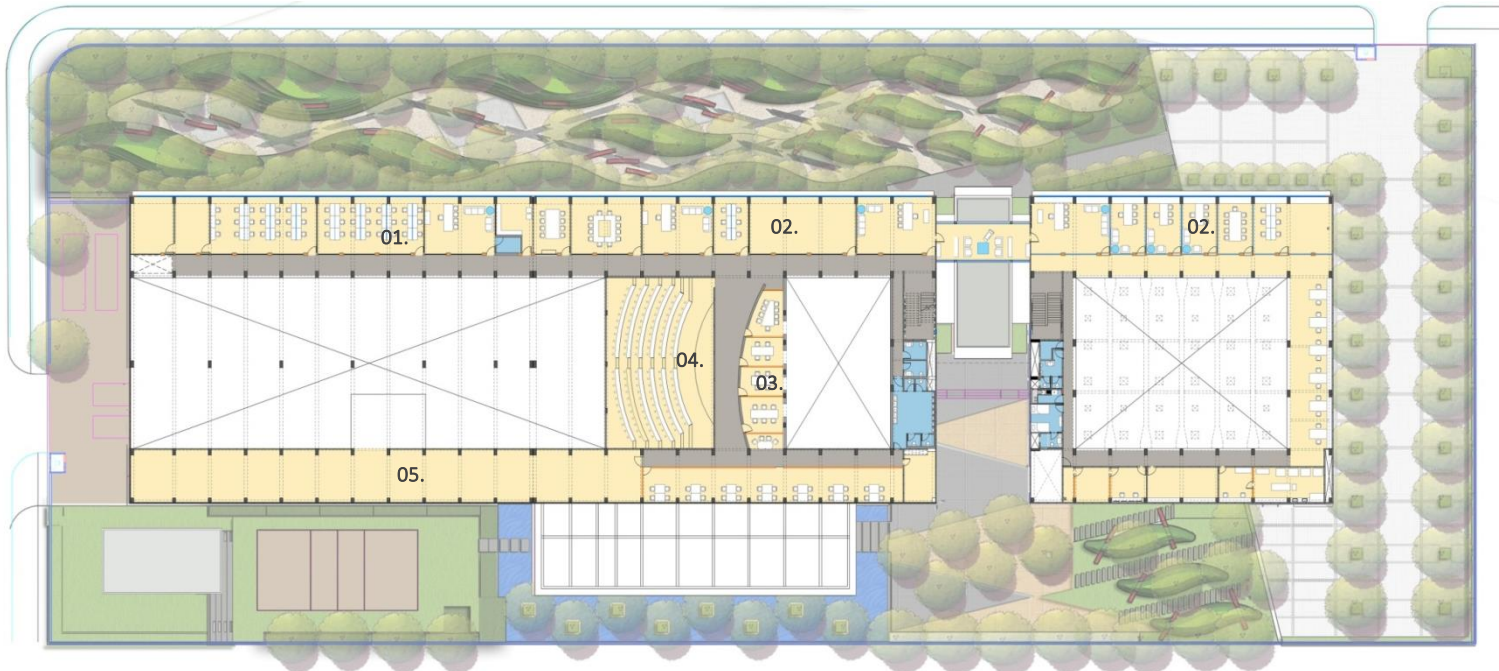


GROUND FLOOR PLAN

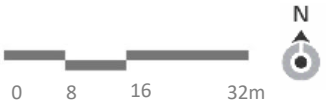


Ground floor mainly has offices, workshop, processing area, machine room, dining area and kitchen. Servant quarters are also provided with toilets. A volleyball court is also designed for recreation purposes.

- 01. Reception
- 02. Technical assistance offices
- 03. Machine manufacturing workshop
- 04. CNC Machine room
- 05. Demo room
- 06. Diamond processing factory
- 07. Dining
- 08. Kitchen
- 09. Volleyball court
- 10. Servant quarters



FIRST FLOOR PLAN



First floor of the building has office spaces including administrative and executive offices, buyer's cabin, auditorium and storage area.

- 01. Administrative offices
- 02. Executive offices
- 03. Buyer's cabin
- 04. Auditorium
- 05. Stores



FORM FINISHED
CONCRETE



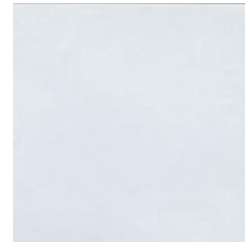
ALUMINIUM



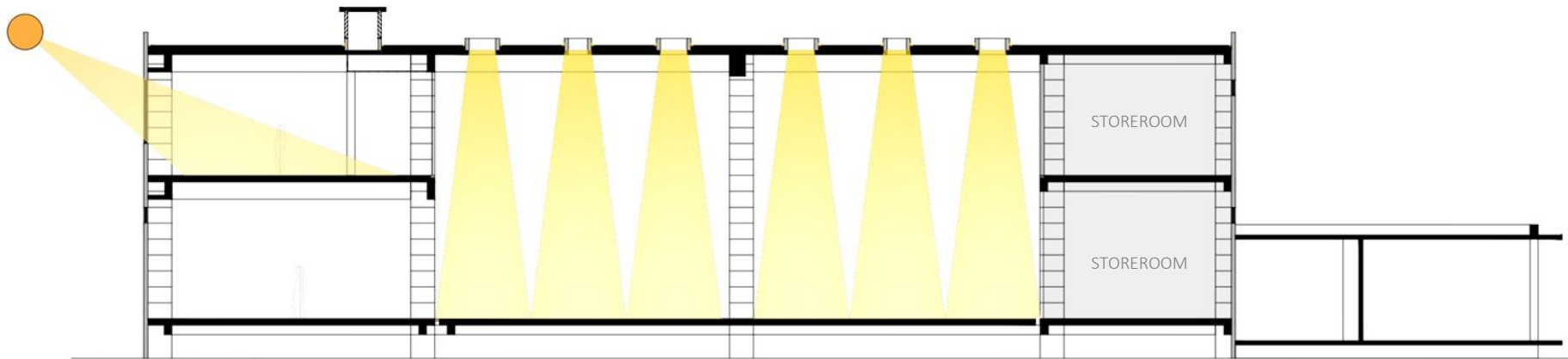
CORTEN STEEL



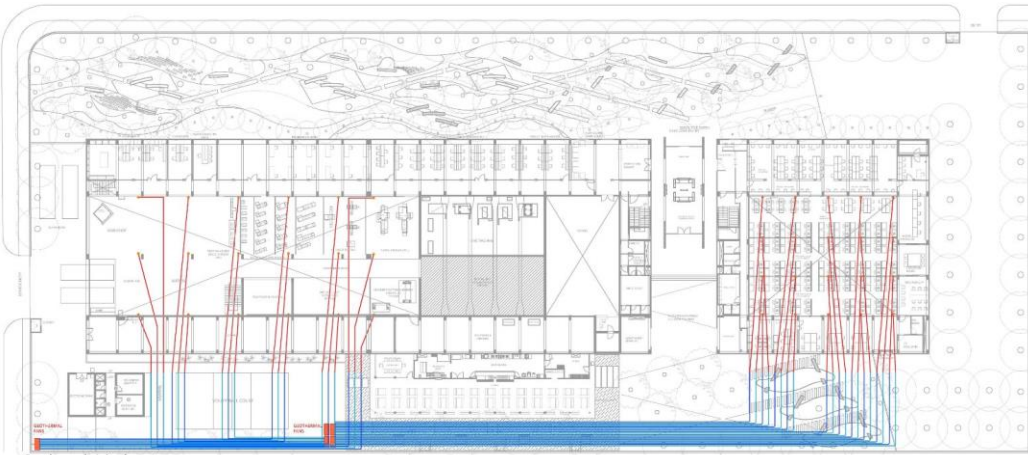
JAISALMER STONE



GLASS



The orientation of the building is planned in a way that the North light is used to its fullest for all the office spaces and the skylights for the double- heighted production spaces. The South side is blocked by the storeroom block to reduce the heat gain due to the harsh sunlight.



Geothermal piping layout



STRUCTURE OF THE SYSTEM



In an effort to improve the oxygen levels of the factory areas, abundant cool air is infused through the indigenously designed Geothermal cooling system. The outlet emerges from the floor in the space which has a height about 9m. So to diffuse the air gently into the space, a number of posts in stainless steel has been designed which also has an ambient light incorporated into it.



02. GEOTHERMAL COOLING OUTLET CUM LIGHTNING POST



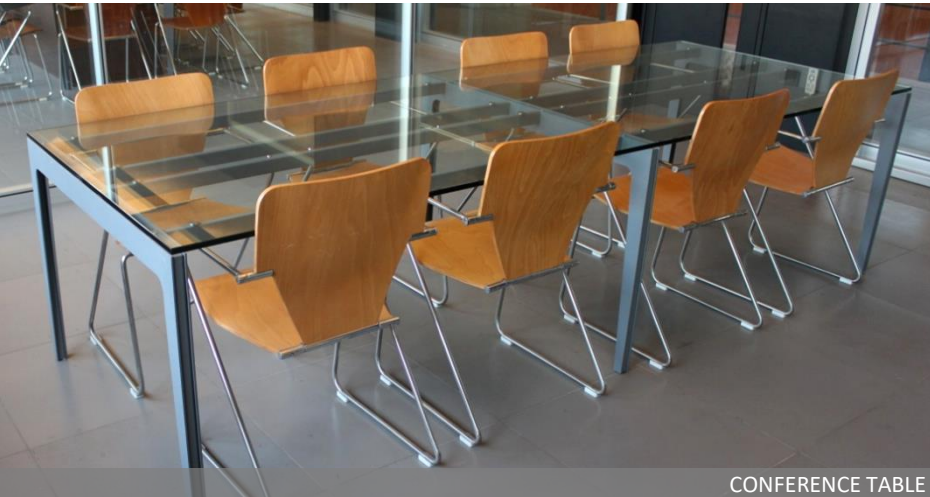
WORKSTATION

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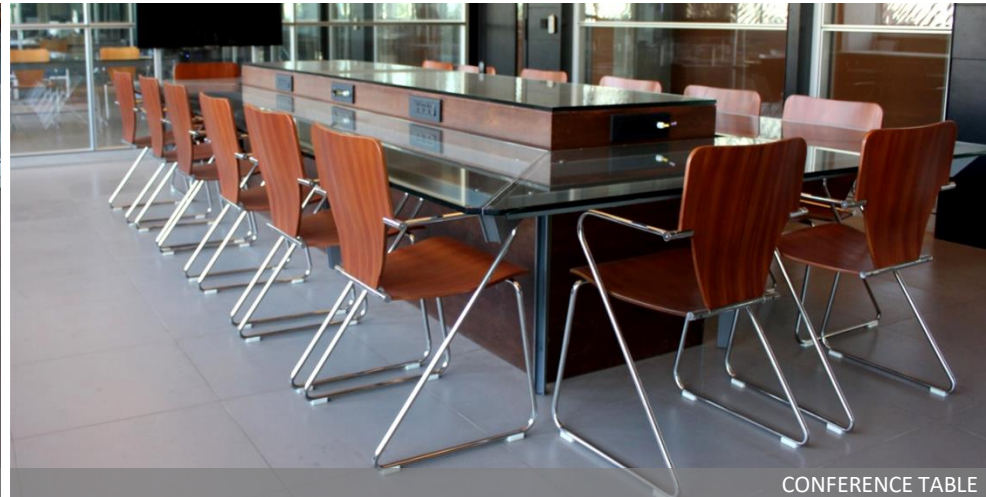


MODULAR FURNITURE DESIGN:

From worker's table to director's table to the conference table, everything was designed and developed keeping in mind the required strength and stability of the function. The attempt was to reduce the material and yet get the desired strengths. The tables are made primarily of MS frame, MS storage units with a Granite or Glass top. An entire family of tables using the same language and materials have been developed for the project, which have now become furniture that the client is willing to manufacture for other projects too.



CONFERENCE TABLE



CONFERENCE TABLE



DIRECTOR'S OFFICE

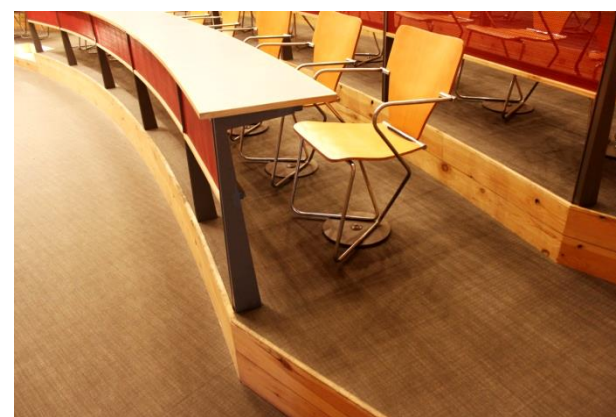
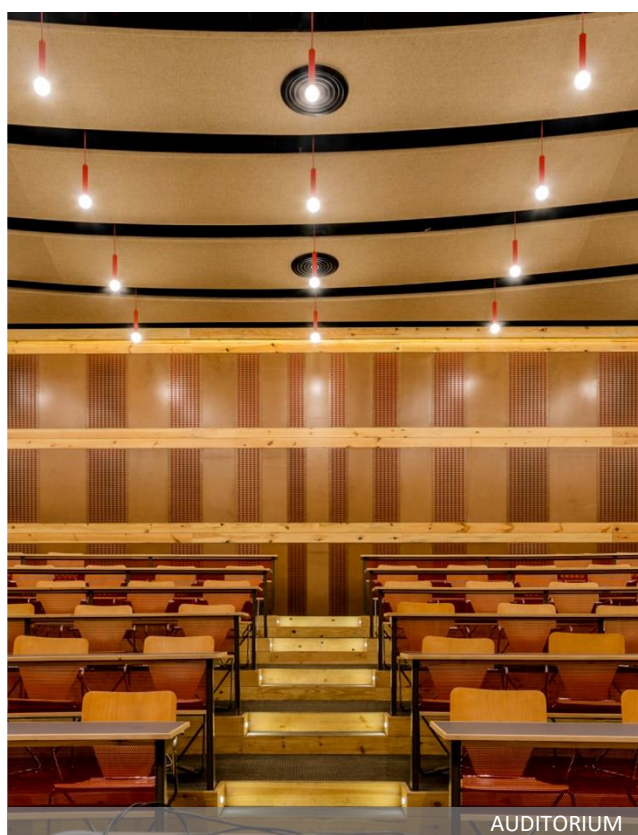


DIRECTOR'S OFFICE



MULTIPURPOSE CHAIR:

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AUDITORIUM SEATING:

In the auditorium for about 125 persons, mainly meant for training sessions, needed writing desks too. Usually, its observed that the chairs remain in haphazard positions when people get up and leave. So an auto-retracting chair has been designed indigenously for the project, which comes back to its position as soon as someone gets up and leaves. This became a long and interesting learning exercise in mechanical engineering.

03. FURNITURE DESIGN

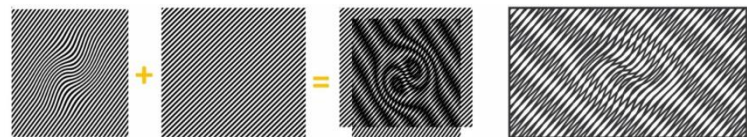


AUDITORIUM

03. FURNITURE DESIGN



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04. THE DRAMATIC MOIRE SCREEN



THE NORTH FACADE

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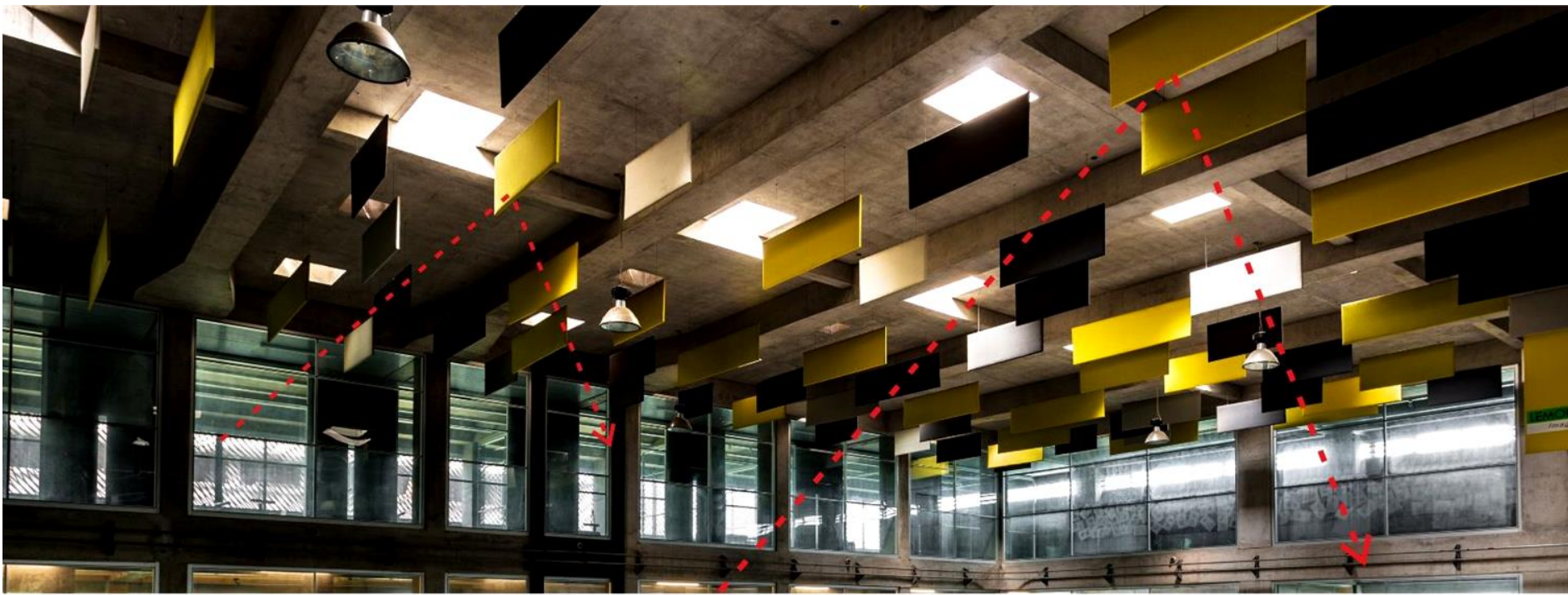


ENTRANCE



STAFF ENTRY AND BRIDGE CONNECTING TWO UNITS

04. THE DRAMATIC MOIRE SCREEN



Having created an interesting two floor heightened place for the diamond polishing, an important aspect that was to be addressed was the higher sound levels due to the machines. This would be further worsened by the hard floor, ceiling and the glazing partition on the three sides. An interesting installation of insulation panels was provided which synergistically combined acoustical engineering and aesthetics.

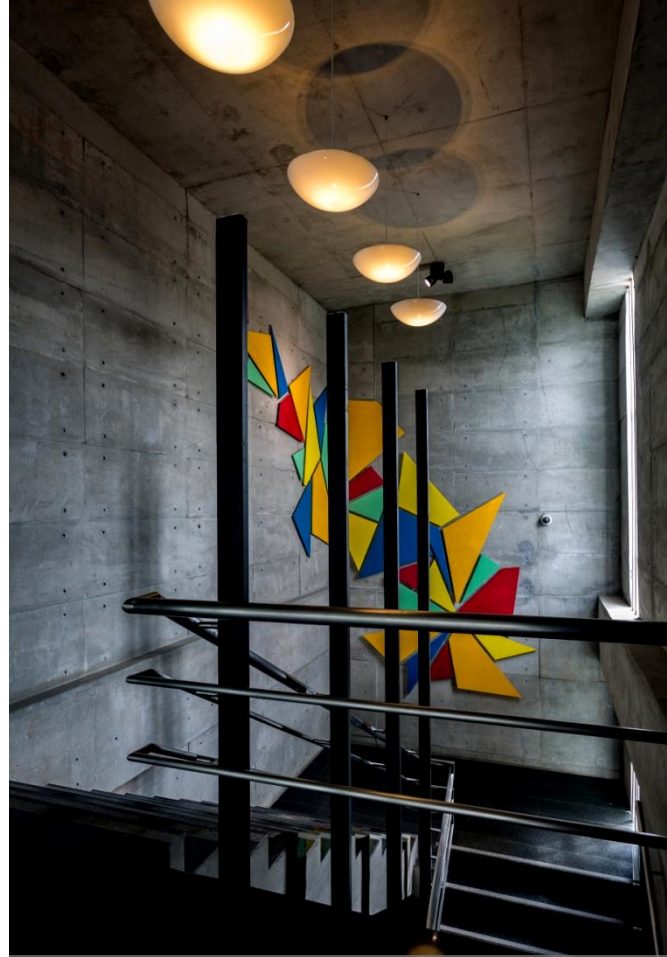


WORKSTATION

05. THE ACOUSTICAL SOLUTION



PASSAGE



STAIRCASE

The project works in just one shift, the day shift. The architecture of the project allows abundant daylight for almost all the working spaces. However, to supplement this, simple indirect diffused lighting systems have been designed for various spaces. These light elements also allow to locate the camera, or spotlights, or fire alarm as per need, in a project, where otherwise, has open form finished ceiling and no false ceiling at all.



06. AMBIENT LIGHTING SYSTEM



WAITING AREA



WORKSTATION

06. AMBIENT LIGHTING SYSTEM



PASSAGE ALONGSIDE OFFICES AND DOUBLE-HEIGHT WORKSTATION



DINING AREA

Any project is a huge responsibility for the designer since it has a huge impact on the environment. So, this project too tries to minimize the damage through a number of design intents and measures like abundant day-lighting, about 200 KW of solar power generation capacity, energy efficient HVAC, Geothermal cooling, T5 and LED lighting, and of course reuse of waste materials. An interesting usage of the aluminum pipe pieces from Geothermal cooling system, has been made in creating the solar screens for cutting down the sunlight in the canteen area.

07. REDUCE- REUSE- RECYCLE

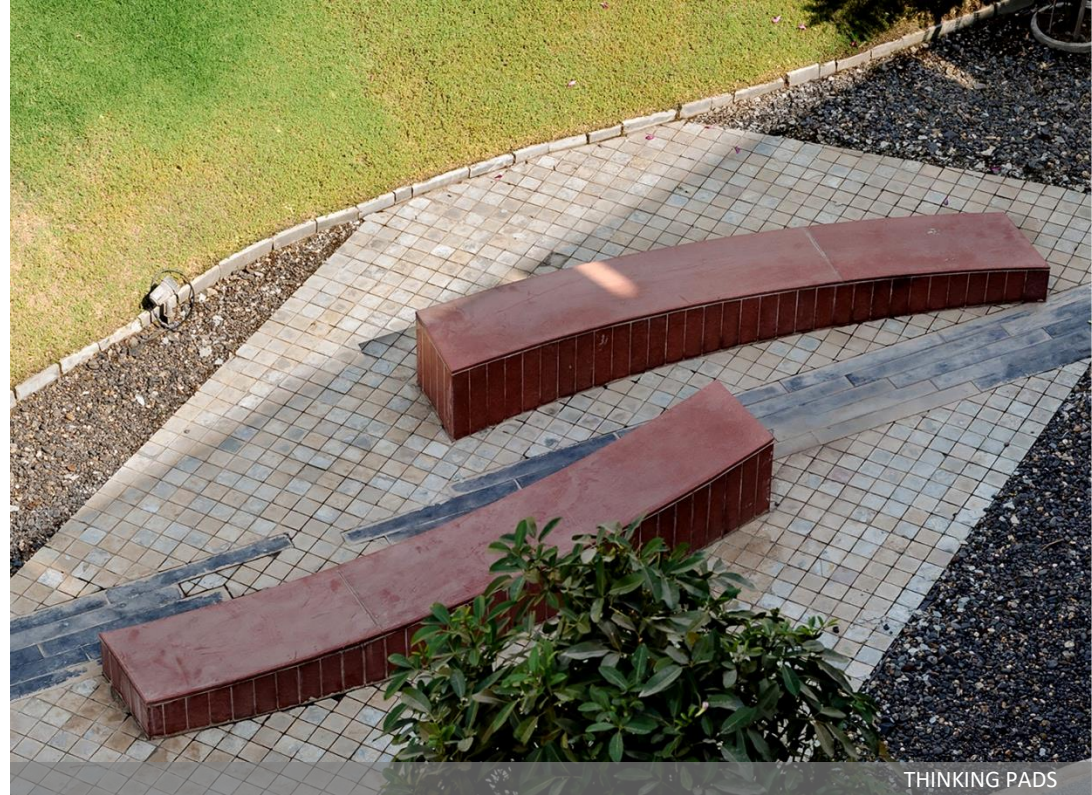


DINING AREA

07. REDUCE- REUSE- RECYCLE



INTERLOCKED LANDSCAPE



THINKING PADS

The exterior is an amalgamation of soft and hardscapes infused and interlocked to one another. The soft landscape is patterned in a wave disposition which is contrasting to stark cubical building design. The granite seating composed of slabs is punctured through the mounds which will eventually with the passage of time make way for employees taking short breaks as the surrounding tree canopy spreads and matures.



BENCH



09. BRIDGE HOUSING LIBRARY



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