



ARCHITECTURE AND METAL  
2016





# PERFORATED FACADES ( SECOND SKIN PANELS )

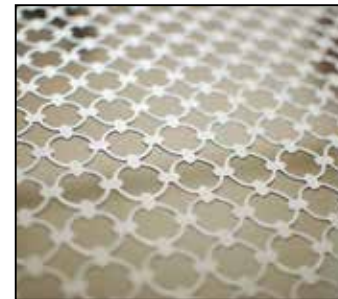
Perforated metal screens are an excellent means of achieving sustainable design objectives. More widely, perforated materials are also very versatile. Although we have focused in this article on external applications, perforated metal screens can also be specified as interior design elements to create see-through partitions or sound-absorbing surfaces. From lightweight decorative elements to load-bearing structural components, perforated metal offers unique opportunities to combine strength, functionality and beauty.



Double skin facades are set typically set between 0.2 and 1.5 meters away of the building's external facade. The intermediate space between the perforated metal sunscreens and the building's facade provide shading and resistance to heat loss and gain. In residential buildings they can become outdoor walkways that connect the interior spaces or simply terrace areas. These double skins can control and adjust the sun's rays and can maximize the benefits of solar radiation and minimizing heat gain.

Perforated facades enable interior spaces to benefit from natural light, filtered in such a way that it reduces the glare of direct sunlight and resulting in an environment that is conducive to relaxation and working. Whether used internally or externally, perforations create a dialogue between space, obscuring or inviting views as required and keeping temperature and brightness at a pleasant and practical level. Shade and privacy will continue to be the key practical purposes of perforations, but the potential applications are greater than ever.

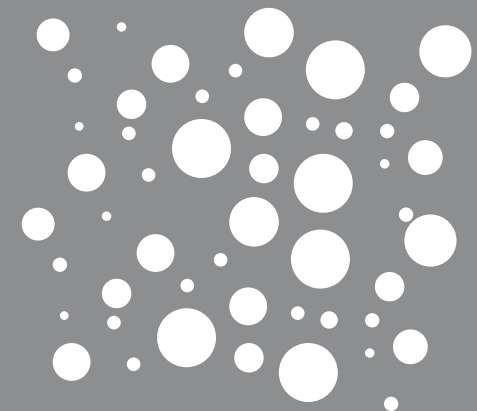
# ABOUT US



Diamond Metal Screens Pvt.Ltd, Belgaum is one of Asia's largest perforators. We provide perforation solutions for your designs. Architecture, IT or food processing, perforated sheets have their own distinct uses. The company is located in Belgaum, (Karnataka).

## Our USP

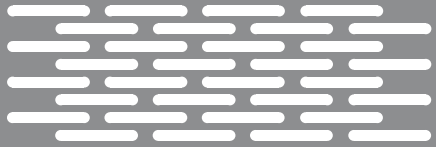
- Perforation done on Stainless Steel, Aluminium, CRCA and Galvanised Steel.
- Hundreds of Perforation patterns available
- Value added services like fabrication and forming of sheets
- Customised design solutions for use of perforated products by architects and builders







# BALAJI AGORA MALL, AHMEDABAD, GJ



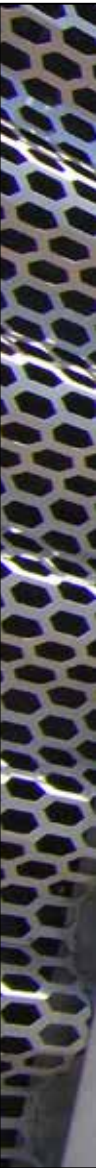
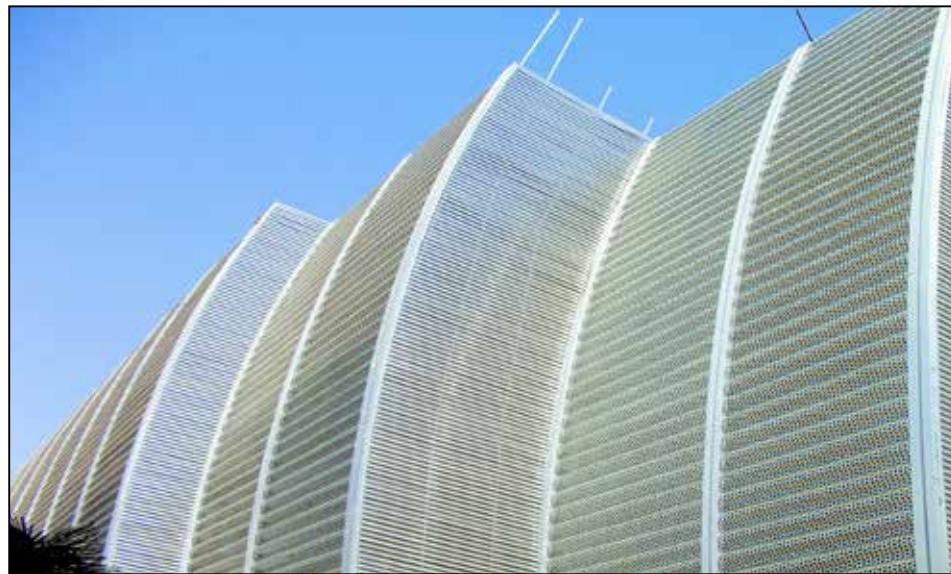
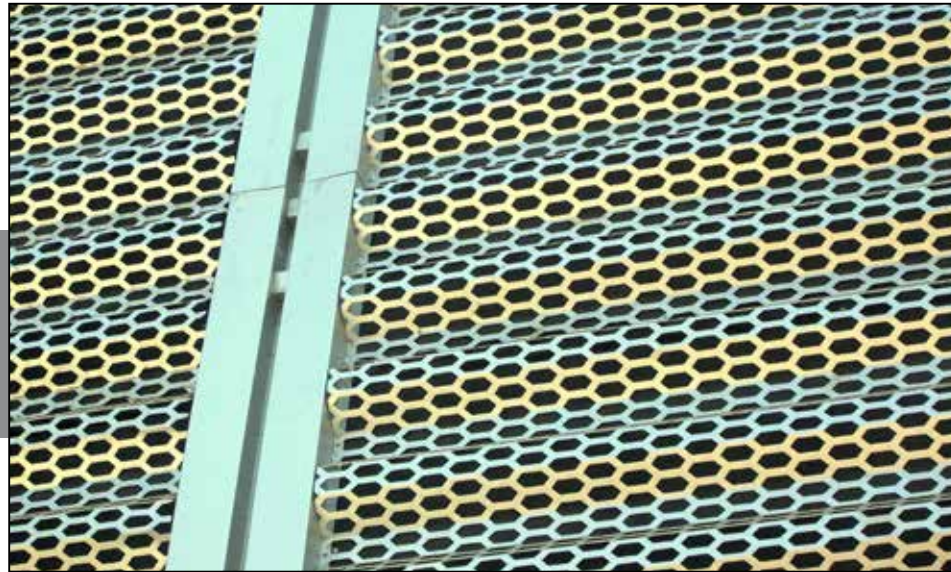
**Material used :** Aluminum 2 mm

**Coating :** Clear Anodizing

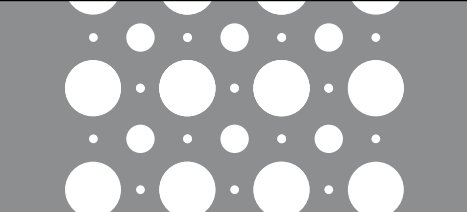
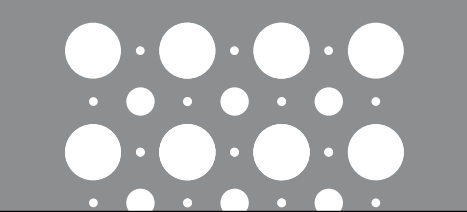
**Area :** 2500 sq.m

**Year :** 2010

The panels were installed as a second skin facade , over a primary layer of ACP panels. This was done primarily to prevent rain water and dust from entering the facility. The advantage of such an arrangement is to render a new look to the building using such facades.













# VAISHNAVI SPLENDOR, BENGALURU, KA



Material used : Aluminum 2 mm

Coating : Clear Anodizing

Area : 5000 sq.m

**Year : 2011**

The panels were installed to cover the maintenance shafts and utility pipes along the elevation of the building. Openable doors were camouflaged into the panels, to provide access for maintenance. This arrangement renders good ventilation and modern looks to a building.





# PRIVATE RESIDENCE, THIRUVANANTHAPURAM, KL

**Material used :** Aluminum 2 mm

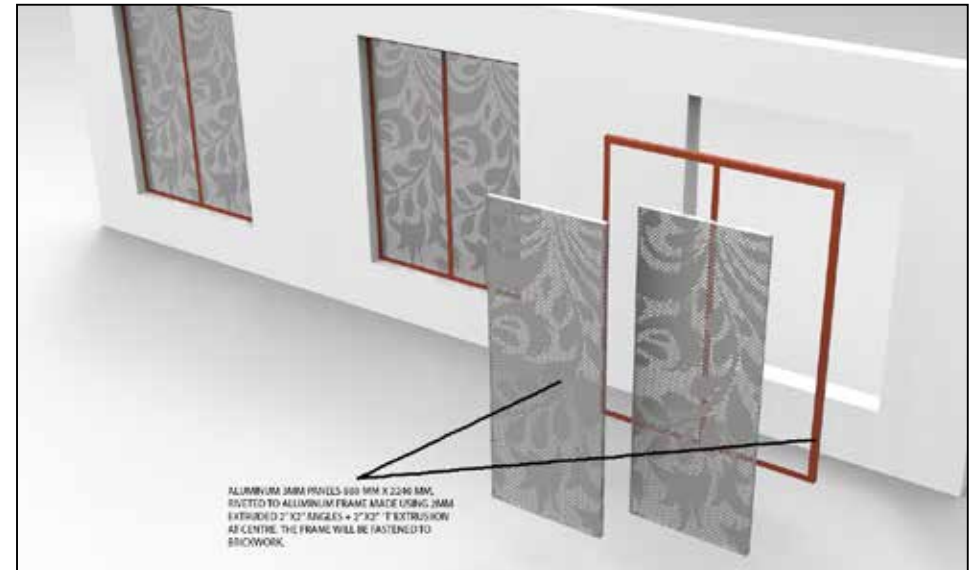
**Coating :** White Powdercoating

**Area :** 100 sq.m

**Year :** 2015

**Architect :** Sajith and Vivek, Chennai.

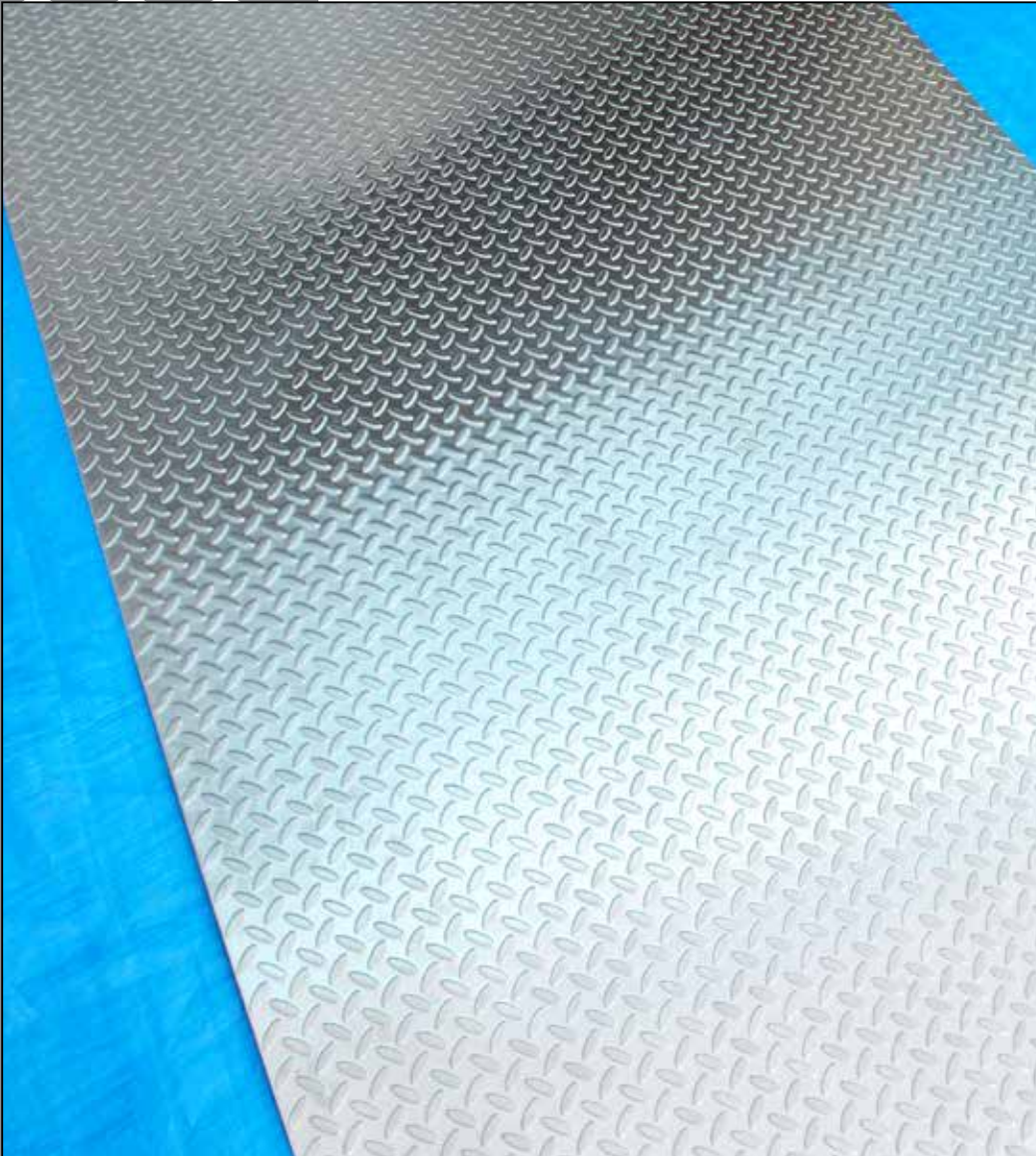
These aluminum perforated panels using PIXELPERF were designed for privacy screens, used in a private residence in Kerala. The concept was designed and developed by Architects Sajith and Vivek, Chennai, TN.







# INDIAN RAILWAYS - SALEM STEEL



**Material used :** Stainless steel grade 304 ; 1.5 mm thk

**Year :** 2012

Anti skid flooring supplied to Indian Railways,  
made of Stainless steel grade 304

Sheet size : 1250 mm x 3000 mm







# PROPOSAL FOR FACADE, KOLKATA, WB

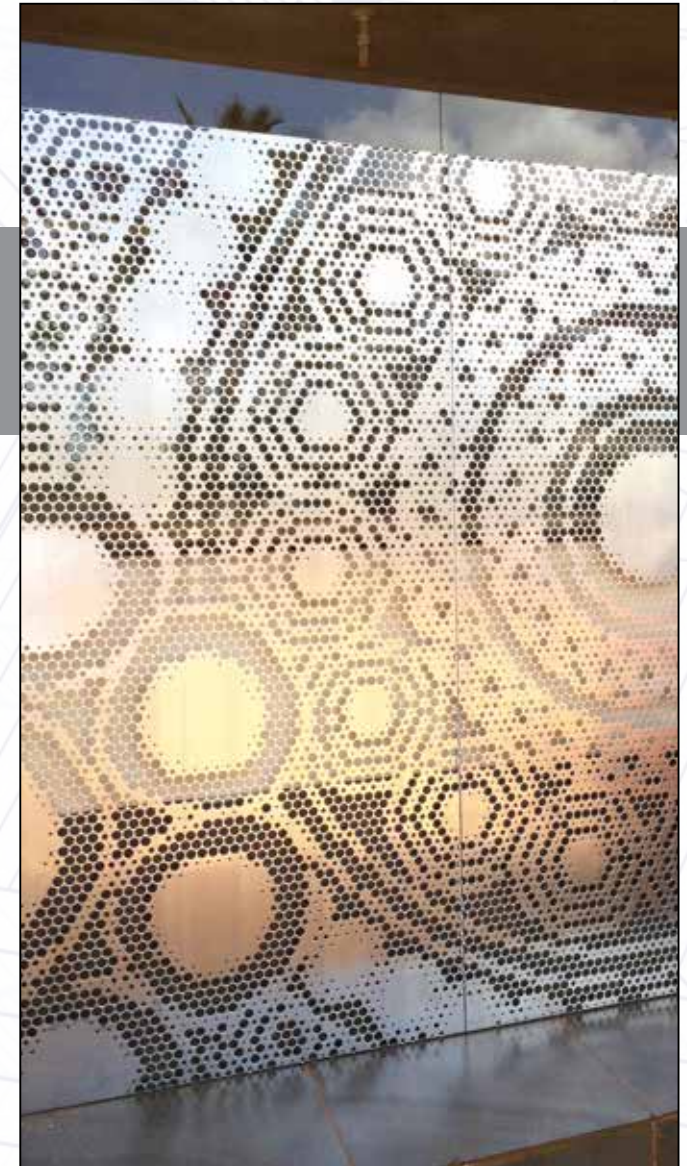
**Material used :** Aluminum 2 mm

**Coating :** White Powdercoating

**Area :** 2500 sq.m

**Year :** 2015

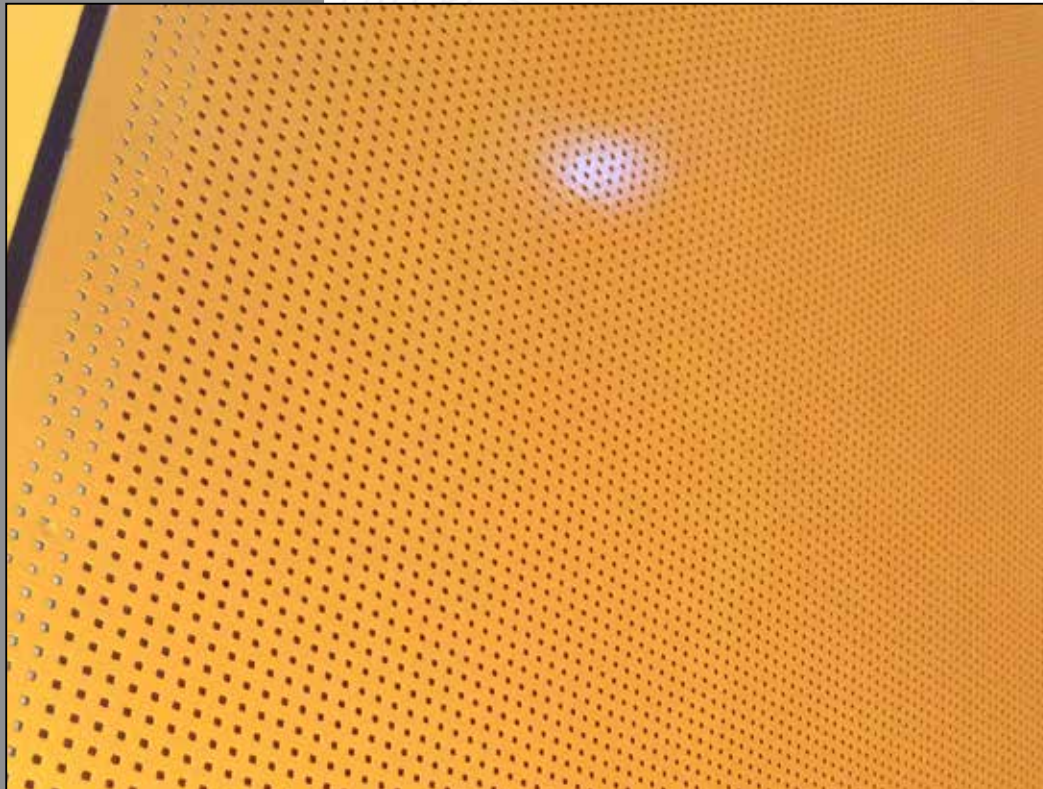
These aluminum perforated panels using PIXELPERF were designed using the traditional Kolka design, as per the architects vision. Shown in the image is only a fraction of the entire facade, which essentially envelopes the entire building facade.







# TAMARA RESORTS, KODAGU, KA



**Material used :** Galvanized steel 1.5 mm thk  
**Coating :** Special liquid coat + Proprietary Nanocoat  
**Area :** 50 sq.m  
**Year :** 2015  
**Architect :** Mr Sanjeev Shankar

## PERFORATED OIL LAMP PANELS - YOGA AND MEDITATION HALL

The perforated doors painted with Golden/Copper combination gives a soothing effect when illuminated by traditional oil lamps, set against a laterite wall backdrop. A concept by Architect Sanjeev Shankar, this was carefully thought of before developing a full prototype. The Nanocoat used on the painted surface helps to clean off the carbon deposits due to the oil lamps.







# AVASA HOTELS, HYDERABAD, AP



**Material used :** Aluminum 1 mm

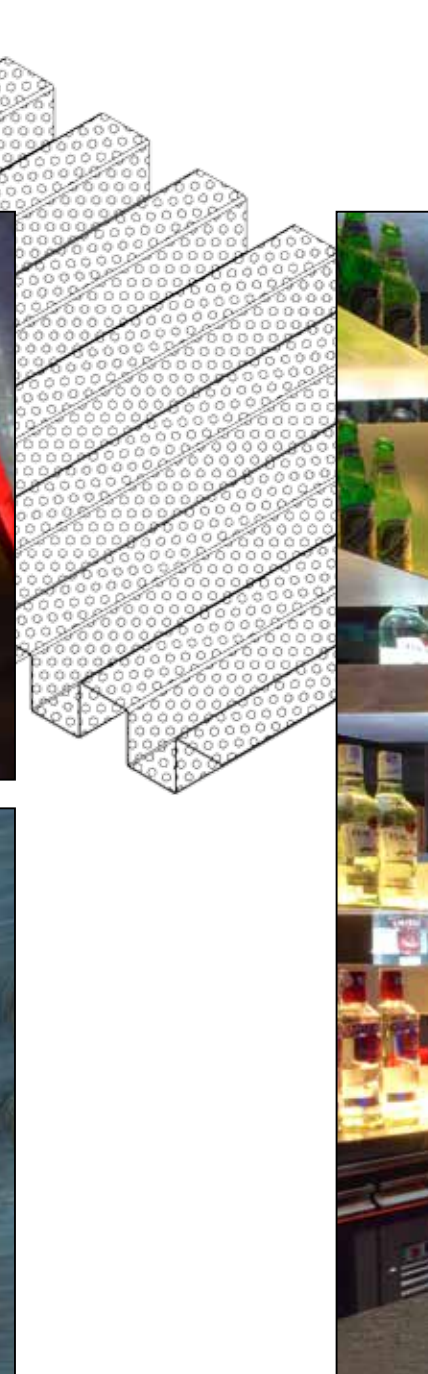
**Coating :** Clear Anodizing

**Area :** 100 sq.m

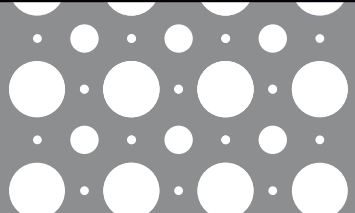
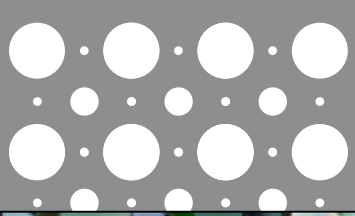
**Year :** 2013

**Architect :** Poole Associates for Hotel Avasa,  
Hyderabad

Perforated corrugated - clear anodized aluminum ceiling panels used to accentuate the ceiling lighting elements in the Sky Lounge at Hotel Avasa, Hyderabad.







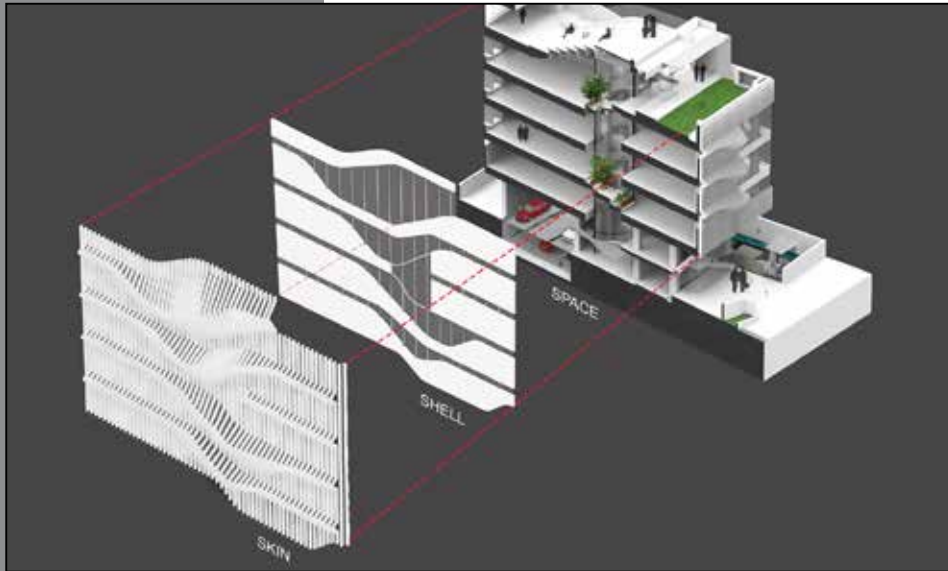








# LOKMANYA BANK, PUNE, MH



**Material used :** Galvanized steel 1mm thk

**Coating :** Powdercoating

**Area :** 300 sq.m

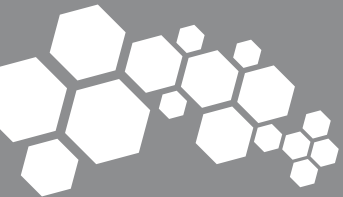
**Year :** 2012

**Architect :** Mr Praveen Bavdekar , Thirdspace Architecture Studio

## SECOND SKIN USING GALVANIZED PERFORATED SHEETS

"What is essentially a simple box, with split levels and an atrium is articulated as a smooth seamless space. This is further enhanced by a skin of vertical fins in perforated steel that cover the building on the southern and south eastern facades. These fins curve out when they encounter the window ribbons, allowing for the openable shutters to be operated. As the ribbon widens, the fins respond by moving away from the building, generating a dynamic facade of continuous variation.

These fins temper the harsh southern sun that hits the building, and allow a more nuanced filtered light into the interiors. They also create an array of light effects that animate the exteriors and interiors of the building, as the sun moves across the sky, or as one moves around the building"



# OUR CAPABILITIES

Tool Manufacturing



Tool Design



Tooling



Welding



Bending / Forming





Sheet metal presses



Sheet metal presses

Fully capable production facility





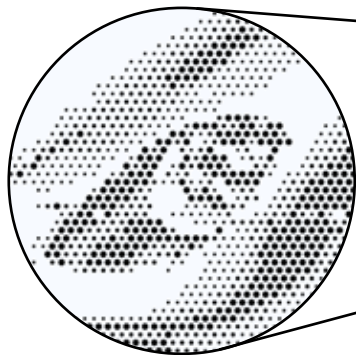
# PIXELPERF

IMAGE PERFORATION TECHNOLOGY

Introducing **PIXELPERF** - The image perforation technology, added to our capabilities brings in a new way of adding vibrance to your interior or exterior architectural elements. Creativity has no bounds with such technology.

## Step1:

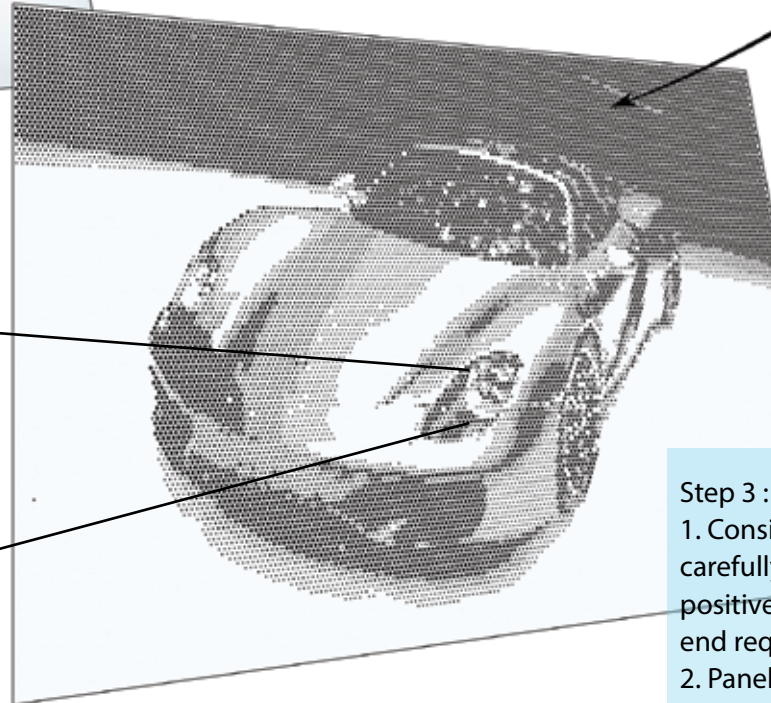
1. Choose image for Pixelperf
2. High resolution preferred.



Perforation details showing how shades of color and light are created by varying hole sizes.

## Step 2 :

1. Choose perforation resolution
2. Choose finish product size and layout options ( Mosaic , Full )
3. Consider final product viewing distance when choosing above parameters ( see illustration )



## Step 3 :

1. Consider backlighting options carefully. Image can be perforated as positive or negative depending on the end requirement.
2. Panel color coating has to be decided based on end result needed and ambient lighting.





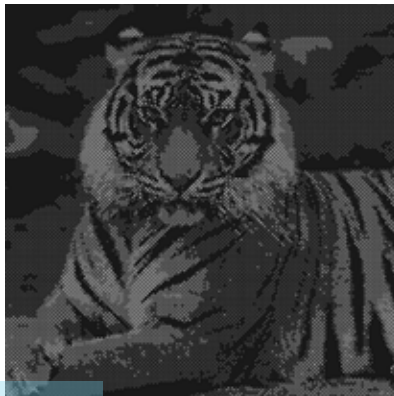
Mosaic tiling style



Full tiling style



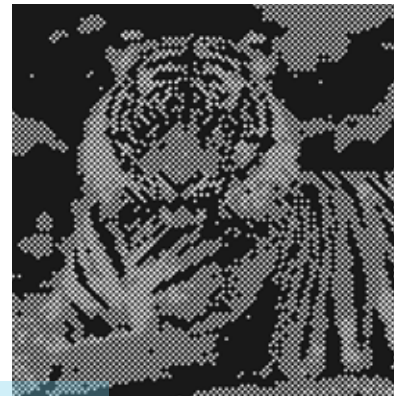
Resolution possibilities



High



Medium

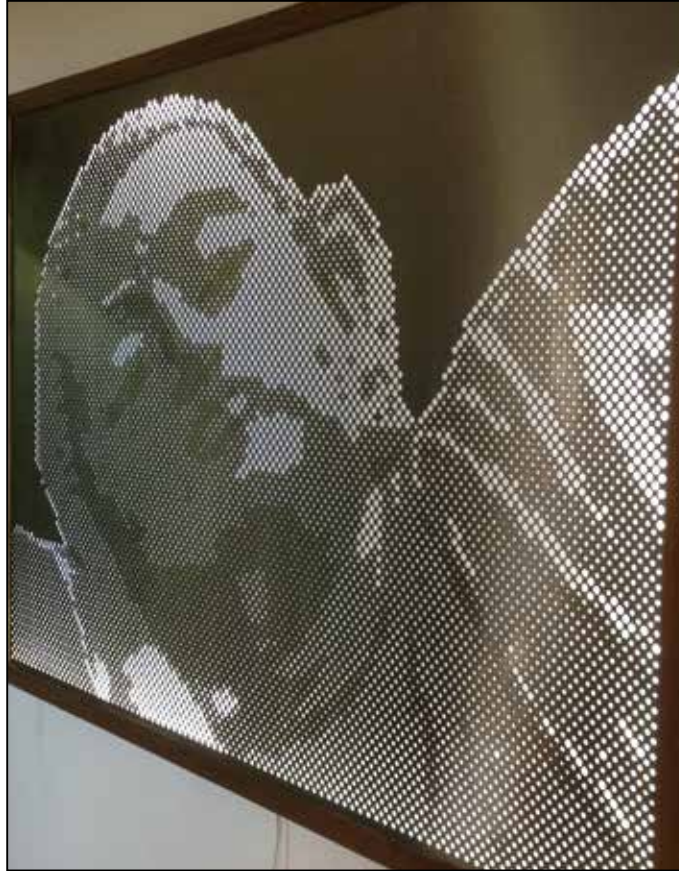


Low

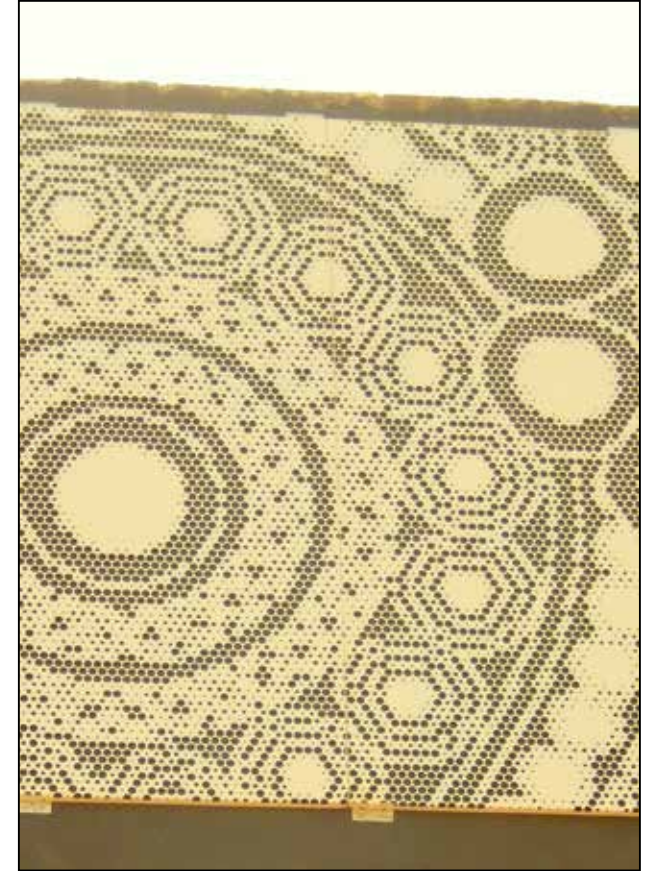




World Map for office space interiors.



Sleeping Buddha on Stainless Steel  
for residential interiors



Traditional 'Kolka' design for exterior



# PROPOSAL FOR TRANSSTADIA, AHMEDABAD,GJ



**Material used :** 1mm Aluminum

**Coating :** PVDF

**Area :** 6000 sq.m

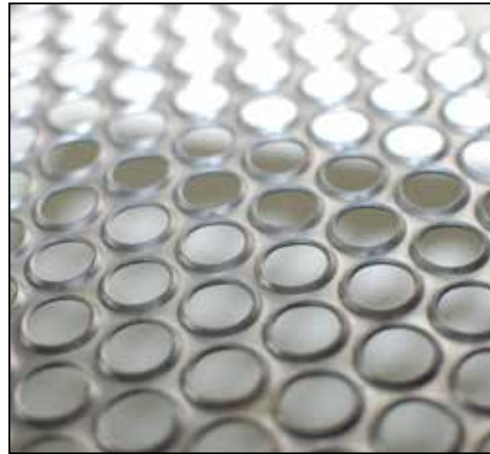
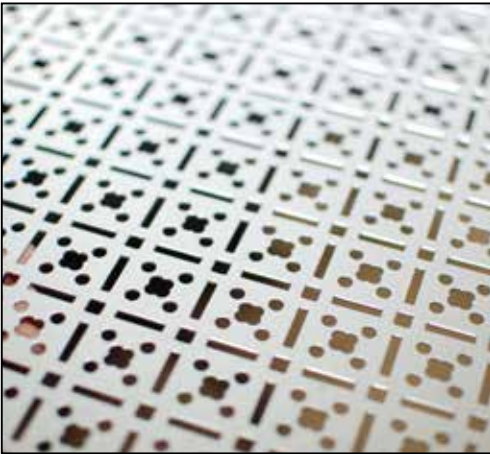
**Year :** 2016

**Architect / Contractor :** DSP Design Associates Pvt Ltd  
/ Alumilite Architecturals Pvt Ltd

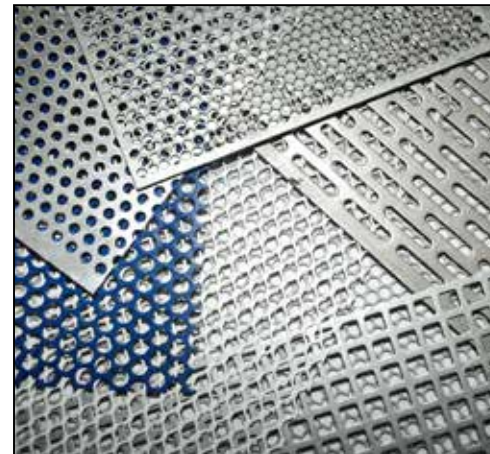
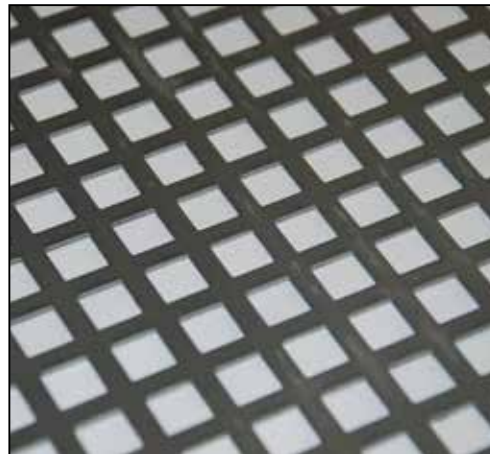




# PERFORATION POSSIBILITIES



A variety of special perforations , with forming can be manufactured. Emboss , Cheesegrater , Dimples etc. Widely used in AntiSkid flooring. Also decorative traditional patterns can be manufactured



Standard perforations with defined pattern and open area, as per architectural requirement can be manufactured. Open area (%) plays an important role in deciding the ventilation in the facade



# OUR CLIENTS






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