

TABLE OF CONTENTS FOR MAT-VANTAGE



GLASS APPEAL

AIS Ecosense offers its green mantra to a Bengaluru based Technology Park.

The IT Complex is often a planned commercial building with workspaces, circulation areas, service chores and utilities. Qualitative building materials hence become a core aspect of such structures to maintain its aesthetic appeal and to meet energy efficient parameters. Glass is one such material which plays a crucial part in the construction of IT complexes. Ecosense, a unique product from Asahi India Glass Ltd (AIS), was used to meet a similar requirement in the development of an IT Complex project in Bengaluru. The project is curvilinear and has long facades facing east and west directions. The

THE SCENARIO

The building was maintained at 21.1-23.9°C. Construction material for walls, roofs, partition and floors comply with the prescriptive values of ECBC. HVAC had to match the COP and EER prescribed in ECBC. At the time AIS came into the project, the glass that had already been proposed had a VLT of 17 per cent, SF of 23 per cent and U-Value of 3.7, the basis for which was never determined except that it was solar control glass. Moreover, the light transmission was very low owing to which the client remained unsatisfied with the total aesthetic appeal of the glass colour.

The only advantage offered by the product was that it had a U-Value of 3.7 in a single glazed unit.

SOLUTION

At AIS, every solution has a scientific basis. Studies are conducted at each site to assist the customers in glass selection. The AIS 4G Solutions include glass selection, glass product, glass processing and glass integration, to give clients customised solutions.

AIS conducted a Climatic Analysis for Bengaluru, which falls in the moderate zone and also a Shadow Analysis with a whole building simulation for a year. Four different glasses, each with respective simulations, were used for the project. Based on the study and after considering the performance parameters, energy efficient norms and aesthetic requirements, a blue shade product from the Ecosense-Enhance was chosen. Enhance is AIS’s brand of solar control range high performance glass product. The AIS Ecosense range of product allows optimum passage of natural light through a window or façade by radiating, absorbing and reflecting away a large part of infra-red heat. The product as enables to maintain a bright and cool indoor space atmosphere was opted

BENEFITS

The simulation resulted in achieving the following conclusions:

- With no temperature and weather extremes, U-Value was not a major concern
- Due to the building geometry, the overall energy consumption on account of glass (i.e. artificial lighting and cooling) was not much different for thermal control glasses from the base case
- Glass with SF of 37 and U-Value of 5.7 was as efficient as glass with SF of 25 and U-Value of 3.7 which helped in saving capital cost.

CUSTOMER BENEFITS

The usage of AIS Ecosense unique product range enabled the client to achieve effective results:

- Savings in cost of construction: The client was evidently able to use the right glass material to meet all requirements, as against the initial proposal which would have cost more.
- Running costs saved: Increased VLT of AIS glass reduced the need for artificial lighting, which lowered electricity costs
- An aesthetically pleasing building that met all building and energy norms as per ECBC.

Client	A leading developer of state-of-the art Technology Parks for global IT, software and technology enterprises
Need	To build an IT complex in Bengaluru, conforming to ECBC norms, that is cost-effective yet of high quality
Solution	Ecosense from AIS (Enhance Solar Control Range – Blue Shade)