



## Conserve energy by using Insulations in Pre-Engineered Buildings

Insulation material is attached or placed within walls or roof to prevent the loss of heat from the building. Insulation material are used to keep the building cool when it's warm outside and warm when it's cool outside.

Insulation also helps to reduce the amount of noise that enters or escapes from the insulated area and reduces rain induced noise from the metal roof.

The effectiveness of an insulating material is measured using a 'U-value'. A U-value is a measure of how much heat is conducted through a structure. Correctly installed insulation will have a low U-value as it will allow only small amounts of heat to pass through.

### Benefits

- Wall and Roof insulation makes it easier to heat and cool the space and save money on power bills
- Also, depending on the type of insulation used, there may also be a significant reduction in noise within the space, since many types of wall insulation have acoustical properties.
- By insulating one can even reduce the emission of harmful gasses in air. Thus reducing toxic vapour inside the building

### Insulation recommend by Interarch Building Products

#### Glass wool (fiberglass)

- Made from melted glass spun into a flexible mat of fine fibers
- Available in low densities and roll form with the reflective vapor barrier for convenient installation under metal roofs
- Excellent Compressibility

#### Rock wool

- Made from mineral rock melted at high temperatures and spun into a mat of fine fibers.
- Available in higher densities
- Suitable for double skin roofing or roofing requiring walkable insulation

Other characteristics are similar to glass wool. Glass wool and rock wool are together referred to as 'mineral wool' products. Due to their potential to irritate the skin and the upper respiratory tract, full protective clothing, including gloves and a face mask, should be worn during installation.



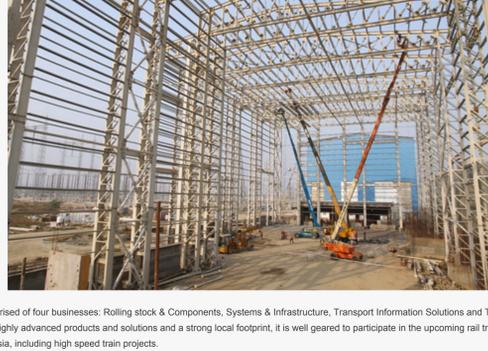
## Interarch Light Buildings: Retail Outlets, Shops & Kiosks

Interarch Light Gauge Framing Systems has got unmatched advantages over the conventional construction system. It yields no pollution during construction, and easy to maintain.



## Project Spotlight: Alstom T & D India Ltd., Haryana

Interarch India's leading Turnkey Pre-Engineered Metal Building & Steel Construction Company delivers endless possibilities for Industrial Infrastructure. Interarch recently completed a project for Alstom T & D India Ltd. in Kurukshetra, Haryana.



Alstom India is comprised of four businesses: Rolling stock & Components, Systems & Infrastructure, Transport Information Solutions and Train Life Services. With a full range of highly advanced products and solutions and a strong local footprint, it is well geared to participate in the upcoming rail transportation projects in India and South Asia, including high speed train projects.

Project Name	Alstom T & D India Ltd.		
Project Location	Kurukshetra , Haryana		
Building Usage	Valve Hall	GIS Building	Store Building
Project Area	3603.75 SqM	1229.34 SqM	1269 SqM
No of Building	Building 1	Building 2	Building 3
Length	93 M	89.93 M	47 M
Breath	38.75 M & 26.85 M	13.67 M	27 M
Height	26.85 M	13.5 M	7 M
Design Code	IS-800-1984		
Tonnage	1844 MT		
Live Load	0.75 KN/SqM		
Seismic Zone	IV		
Cranes	2 Crane with 6 MT Capacity used		



## Industry Spokesperson: Evolution of Pre-Engineered Buildings in India, by Mr. S.K. Nandi

Er. S.K. Nandi has over 40 years of extensive experience in the infrastructure and construction Industry. He is one of the pillars at C.P. Kukreja Architects and has a very long association with the firm, currently working as a partner.

Er. S.K. Nandi is B. Tech Civil, Engineering, Graduate from Calcutta University and Master in Structural Engineering from University of Bradford, United Kingdom. He is also a fellow and chartered engineer from the Institution of Structural Engineers, U.K. As a designer Mr. Nandi has been involved in several large landmark industrial projects for major national and international clients in different parts of the country. Drawing upon his four decade of experience, he feels foremost importance should be given to design parameters for a modern industrial project starting from site selection, to functional requirements, material selection, construction techniques and cost & time factors has to be considered. He feels, Pre-Engineered Buildings construction in recent years has developed into an important design philosophy and construction system for industrial projects in India

As per Mr. Nandi, the time has come for Multi-Storey Steel Buildings with metal deck and fire protection in India. According to him, with depleting natural resources and continuous pressure on environment, it has become imperative for architects these days to adopt green building concept. He has executed many renowned projects in India in Pre-Engineered Steel industry and has contributed in projects like Tata Motors Ltd, Lucknow, Perto India Pvt Ltd, Jaipur, JNU University, Sir Ganga Ram Hospital, Gautam Buddha University and many more.

Er. Nandi has share his view regarding evolution of steel structure in India. However, the evolution of PEB construction has an interesting historical context. After the Second World War, there was severe scarcity of food grains in erstwhile Great Britain. It was necessary to build warehouses to store the food grains. The British Government invited industrialists, builders to develop large warehouses quickly with new building materials. One company responded to this invitation and prefabricated the building components in large portal frames in structural steel offsite which could be quickly transported and erected at site to the requirement of the warehouses. This prefabricated construction system was approved and adopted by the British government to build large warehouses.

This was the beginning of Pre-Engineered Buildings or Pre Engineered Building Construction. In the sixties & seventies western expatriates, flocked to Middle Eastern countries for development of oil fields. The region was totally undeveloped and the food item including bread & butter, consumer goods needed by the large expat communities were imported on daily basis by plane loads and had to be stored in enclosed built up spaces such as warehouses. To meet this urgent demand, PEB construction came to the Middle Eastern countries. The PEB construction got saturated after construction of thousands of inland, and port warehouses all over Middle East. The senior managers who were managing the Pre-Engineered Buildings companies in the Middle East were mostly Indians. Once, the construction of these buildings got saturated in that area, the same executives moved to India and started the Pre-Engineered Building construction here

This is how Pre Engineered buildings sets-up in India in the early ninety's. This was the period when India was also going through industrial boom. Small and big industrial units were being built all over the country. Having built a few hundred warehouses, the Indian PEB companies saw this as an opportunity to introduce the Pre-Engineered Building model in industrial building construction.



## Project Management Tip: Guidelines before Starting Tracdek Roof & Wall Sheet Installation

1. Review of sheeting installation drawings before starting the Tracdek Roof & Wall Sheet Installation
- Read the Tracdek Roof Sheet installation drawing thoroughly, Issued by engineering department
- Arrange and review all the section details given in the detailed drawing

2. Following details must review carefully before starting the work

- Tracdek Roof Sheet projection on eave and hip (ridge) location
- Tracdek Roof Sheet overlap & end lap details
- Day Light Panel fixing details
- Turbo vent fixing details
- Ridge ventilator fixing method and sequencing
- Trims and gutter fixing details
- Crimp curve panels fixing details on ridge, eave, monitor and canopy location.



3. Structure inspection

- Check & ensure purlin and Girt level and its alignment, before starting the Tracdek Roof & Wall Sheet Installation
- Check & ensure the proper rafter end wall column alignment and straighten with plumb on gable end location
- Strut purlin and ridge purlin should be aligned before starting the Tracdek Roof & Wall Sheet Installation
- Check the diagonal on Tracdek Roof Sheet area
- Check and ensure the openings for Gravents, turbovents , light weight structured monitors and cut outs/opening through the roof
- Purlins & frames should be aligned before starting the Tracdek Roof & Wall Sheet Installation (Field drill if any, should be performed before starting the Tracdek Roof & Wall Sheet Installation)



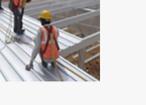
## Customer Testimony

Interarch Building Products executed Pre-Engineered Building project of our Warehousing Unit of Ozone Naturals at Faridabad in Haryana. We appreciate the effort put in by the team at all stages, resources deployed and cooperation extended for the satisfactory and timely completion of this project.

We wish Interarch very best in all their future endeavors.

Yours truly  
For Ozone Naturals  
(A Div. of Srikantho Sintered Products Pvt. Ltd.)

Venkat Gupta  
Director



### Project Completed

- Mehali Paper Pvt Ltd in Gujarat
- Ajesh Gugnani in Haryana
- Asahi India Glass Ltd in Haryana
- J. Kumar Infrastructure Projects Ltd in Maharashtra
- Seizer Innovex Pvt Ltd in Uttar Pradesh



### Project Won

- Berger Paints India Ltd in Assam
- The Madras Pharmaceuticals in Tamil Nadu
- Softgel Healthcare Pvt Ltd in Tamil Nadu
- GE India Industrial Pvt Ltd in Maharashtra
- Indospace Industrial Parks Pvt Ltd in Haryana



## Event Participation

Interarch Building Products participated in conference on Planning and Design of Tall Buildings including Earthquake and Wind Effect as Silver Sponsor on 6th & 7th December 2016



## Health Care during winters

- Boost up immune system by adding Green Vegetable & Fruits to be Health enriched with Vitamin & Protein
- Skin health: The cold weather can affect our skin and contribute to conditions such as dry, itchy skin, chills, blisters and eczema. Protect skin from getting dry & rough by applying natural moisturizer
- Be physically active by doing exercise and running regularly to keep body warm and fit.
- Dress up suitably with woolen and warmer clothes.
- Stay hydrated: Don't forget to keep drinking water
- Sleeping well: Proper sleep (eight hours for an adult) can help keep the body's immune system healthy and fight off colds
- Keep Hands Washed and Cleaned

