



## Customer Delight through Value Engineering

LYSAGHT® delivers High Performance Leak- Proof Roofing Solution

**LYSAGHT®**

*Global Excellence since 1857*

### Where

Salcomp Manufacturing India Pvt. Ltd., Sriperumbudur, Chennai

### What

Re-roofing of damaged roof with Double Skin TRIMDEK® and KLIP-LOK® 700 roof system. Variable height supporting brackets were also provided to ensure perfect alignment to the existing undulated roof.

### Purpose

Salcomp wanted to set up a manufacturing unit for mobile accessories for a global brand – Nokia, within an area of 12,000 sq.mts. with re-roofing of total 160Tons.

### Background:

Finland-based Salcomp, a global leader in the mobile phone charger market, with an existing capacity of manufacturing 150-200 million chargers annually, wanted to further expand their manufacturing capacity by another 100 million chargers per annum.

The existing site had a 10 year old PEB building. There were severe leakages from several locations which were amounting to huge production losses. The Structure required a comprehensive inspection by a reliable roofing consultant.

Salcomp approached Tata BlueScope Steel, who implemented an in-depth study of the existing structure.

## Customer Requirement

After a comprehensive investigation, Tata BlueScope Steel's team identified the root cause of the problem. It was evident through investigations that the existing structure had many collateral loads, hanging from purlins and rafters. Many rafters were already deflected leading to further deflecting the main purlins, resulting in several undulations in the existing roof which was Single Skin Screw Down System. Undulations caused rain water stagnation ensuing huge leakages at many places.

## Solution Offered

To address customer's primary concern for leak-proofness; Tata BlueScope Steel suggested LYSAGHT KLIP-LOK® 700 widest concealed roof system with LYSAGHT TRIMDEK® as the liner panel. LYSAGHT KLIP-LOK® made from high strength ZINCALUME® steel has long been a design favourite, for prestigious commercial, industrial and architectural projects across the globe. Not only performance; but with bold rib geometry rising from wide, flat pans, LYSAGHT KLIP-LOK® roof provides a strong visual statement and its flat pans also offer excellent water carrying capacity. It is one of the strongest profiles with longer spanning capability. Absence of piercing and its special clip locking ensures zero chances of roof leakage. Tried and tested at NATA Lab (Australia), under rigorous cyclonic and non-cyclonic applications, LYSAGHT KLIP-LOK® offers on-site roll forming preventing step joints and end laps.

While the solution seemed straightforward, there were a few onsite challenges that had to be addressed going beyond standardisation, ensuring customer centric solutions:



### Design Challenge:

#### Challenge

There were too many undulations along the slope length of roof due to deflections in the main frame rafters and purlins.

These undulations needed to be rectified to achieve leakproof roof system.

#### Solution

Contour layout was conducted to measure the undulations at every 5 metres along the roof length. Accordingly, supporting brackets with heights varying from 40mm to 140mm were designed and detailed to get the same level or plane of top sheet.

### Operational Challenge:

#### Challenge

Fixing of LYSAGHT KLIP-LOK® clip was a challenge since sub purlin line was not straight due to longitudinal misalignments of main purlins.

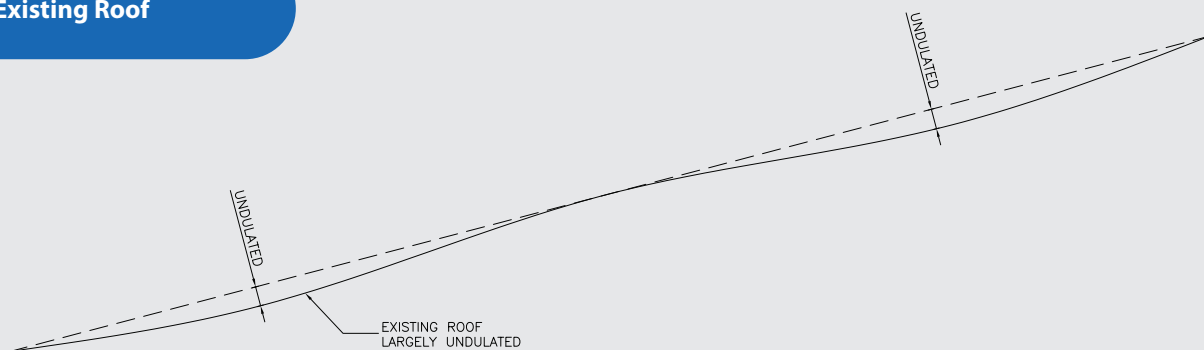
#### Solution

Supporting brackets were designed and detailed to support sub purlins.

Alignment was made to bring the sub purlins in line, parallel to building length to achieve KLIP-LOK® clips in straight line.

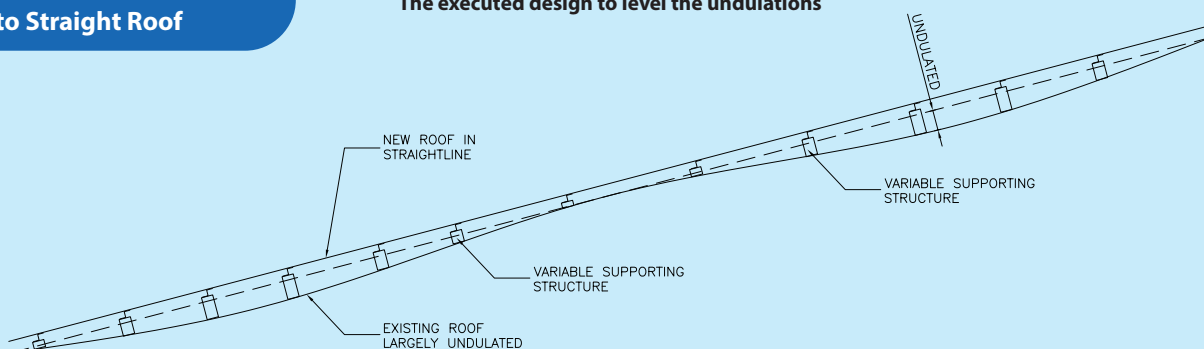


## Existing Roof



## Existing Roof Modified to Straight Roof

The executed design to level the undulations



Variable Spacer brackets on top of LYSGAHT TRIMDEK® Liner profile.

## Conclusion

- Project completed with Zero Harm: new age construction technology from LYSAGHT® team was put into place to enable the workforce to execute the job seamlessly. Due to safety training and regular supervision, the project was completed without any unsafe incidence.
- Right solution with on-time delivery - LYSAGHT® team proposed the technically correct offer which was eventually accepted by the customer. Furthermore, on site roll forming and excellent project management ensured on-time delivery.
- 100% Leak proof solution - Single length sheet of 60 metres from ridge to eave avoided any joints & eliminated any kind of leakage. This also helped savings in lap lengths thus reducing the input material and installation time. Since the customer was looking for a leakproof roof, installation support and best quality workmanship were provided to achieve the desired objective. Inspections were undertaken on a daily basis to achieve the highest quality of installation.

With collaborative team work, design optimisation and an efficient supply chain management, the project was successfully delivered to customer's satisfaction.



“ Tata BlueScope Steel has successfully completed the re-roofing project at Salcomp unit 3. A total 14,000 sq. mtr. area of the factory was completed within the stipulated time. Also, we would like to appreciate the material quality and timely support. Their safety, quality and performance during the project phase was good. ”

**C R Subramaniam**

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