



LYSAGHT® ROOFING

SOLUTIONS IMPRESSES ONE OF THE LARGEST
ENGINE MANUFACTURERS

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Customer	Cummins India Limited
Location	Phaltan, Maharashtra
Project Size	72,000 Sq. Mts.
Profile Used	LYSAGHT® FLEXLOK™ 500, LYSAGHT® TRIMDEK® 1015
Contractor	M/s B. G Shirke, Pune
Consultant	M/s Venkatramanan Associates, Pune
Project Duration	Dec'12-Apr'13

INTRODUCTION

Cummins India Limited, is India's leading manufacturer of diesel and natural gas engines. For its parts distribution centre; CIL wanted to set up a new facility in Phaltan, Maharashtra. The facility has shaped up to be one of the land mark projects within the vicinity; Cummins Megasite – an architecturally modern structure, is all geared to leverage company's operational efficiencies.

BACKGROUND

CIL, India wanted a strong, durable and aesthetically pleasing roof for its third manufacturing plant at Phaltan. The plant has been designed to produce 45,000 and 1, 20,000 units of the L and B series engines respectively, when operating at full capacity. The scope of work included design, manufacture, supply, project management and installation of new roof in the upcoming project.

CHALLENGES & SOLUTIONS

Challenges Faced	Solutions Provided
Leak proof Roof solution & Transportation of long length sheets	Due to high end manufacturing operations, customer was looking for 100% leak proof solution. LYSAGHT FLEX-LOK® profile comes with on-site roll forming option and provides single length of the sheet from ridge to eave, no fasteners are exposed to atmosphere and eliminates chances of roof leakage. This system provides excellent weather tightness and wind uplift resistance. Due to a large roof area, the overall quantity of sheets would be more if used in standard length and transportation would have be cumbersome. LYSAGHT FLEX-LOK™ sheets of 52 m length were roll formed through on site roll forming method for this project.
Timely Completion of work	Availability of finished goods at site due to onsite roll forming option eliminated transportation time and accelerated the installation work and enabled timely completion of work; the same was achieved through onsite roll forming method which could roll out upto 5000 Sqm area of LYSAGHT® FLEX-LOK™ sheets on daily basis.
Quality of workmanship	With the use of machine seamed and on site roll formed LYSAGHT® FLEX-LOK™ roofing sheets, TBSL delivered a 100% leak proof roofing thereby exhibiting superior quality of workmanship.
Safely Working at the height of 15 metre (50 ft.) and max sheet length of 58 mtr.	Uphill task of facing strong winds, since the work was being carried out at a height was challenging. This was met by adopting high safety standards and accurate supervision of the entire activity.

RESULTS

- **Project Executed 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 trainings and regular supervision the project was completed without any unsafe incidence.

- **On time delivery of project** - With the use of LYSAGHT® FLEX-LOK® on site roll formed sheets; the client was able to complete the project in time resulting to substantial savings in overall project cost and time.
- **100% Leak proof solution:** Value Engineering by LYSAGHT® team helped to optimize the steel usage by providing on site roll forming. Single length sheet of 58 meter 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. As the customer is looking for leak proof roof, we have given installation support of best quality workmanship to achieve the goal of leak proof roof, and the average sheet length of 50 meter was used in project. Project site was located at dry industrial area. Thermal stress developed in the roofing system due to high variation in temperature however LYSAGHT FLEX-LOK® specially engineered aluminium clips and thermal pads slide neatly onto base of clip which can reduce thermal bridging effects. Frequent inspection were taken place to achieve the high quality of installation.
- **Environment Friendly Solution** – LYSAGHT® Flex-Lok™500 profile is made out of high end raw material such as COLORBOND® and ZINCALUME®. COLORBOND® material is environment friendly due to the use of lead free paint system and 100% recyclable material (steel).



Inspection of material during Site Roll Forming

