

# Delhi Metro Rail Corporation

## Introduction

Delhi Metro Rail Corporation (DMRC) a company set up by Government of India and the Government of National Capital Territory of Delhi, started its operations in 1998 and the first section was made open to the public in the year 2002. Presently, Delhi Metro is the world's 13th largest metro system in terms of length serving Delhi, Gurgaon, Faridabad, Noida and Ghaziabad in the National Capital Region of India. Delhi Metro is also India's first modern public transportation system, which has revolutionized travel by providing a fast, reliable, safe, and comfortable means of transport. A unique feature of Delhi Metro is its integration with other modes of public transport, enabling the commuters to conveniently interchange from one mode to another.

DMRC wanted the project to be aesthetically planned and well-maintained. At the same time, they wanted to ensure that the project does not endanger public life nor lead to ecological or environmental degradation. DMRC wanted nothing less than the best for the entire project, which today stands as a benchmark for other cities in India.

DMRC decided to use steel for roofing of the various stations of MRTS project, not only because of the durability of steel but also the lower time required for steel roofing as compared to concrete roofing. Tata BlueScope Steel partnered with top notch international consultants who guided the DMRC on the latest technical know-how all about the Metro Rail business.



## Challenges & Solutions:

Many challenges at various milestones were faced by the engineering teams. The Station buildings proposed were typically curved buildings (both convex & Concave). LYSAGHT® TRIMDEK® 1015 crimp curved sheets and 'Z' Type PURLINS were developed for better production capabilities. DMRC was looking for best material quality with sufficient strength to endure maximum stress and strain in case of any eventuality like an earthquake. COLORBOND® Steel in colours Surfmist, Pale Eucalypt, Sky Blue and Torres Blue was used, attributed to being aesthetically pleasing with high strength and being corrosion resistant, this was a natural choice! Since it was required to supply material for multiple station building at the same time, we ensured proper planning with coordination within the cross-functional teams including Engineering, SCM & PPC teams.

## Conclusion:

Tata BlueScope Steel successfully met the stringent targets, ensuring timely deliverables by providing superior quality of profiled sheets for 16 DMRC stations in Noida – Delhi corridor and 12 TRIMDEK®

1015 crimp curved profiled sheets were supplied along with the supply of 'Z' type purlins for 12 DMRC stations.

DMRC is the first Metro in the World to receive the ISO 14001 Certification for establishing an environment management system at the construction stage of the Metro Railway System. The entire MRTS project is being executed keeping in mind the environment, health and safety guidelines laid down by DMRC.

DMRC today stands for reliable and safer journeys, time-saving for commuters, reduction in atmospheric pollution, reduction in accident rates, reduced fuel consumption, reduced vehicle operating costs and increase the average speed of road vehicles, which has helped in improving the quality of life of people in Delhi and making the city a much more attractive city for economic investment and growth.

India for the first time witnessed colourful steel roofing along with unconventional design aspect (concave/convex) being used for an infrastructure project like Railways System, making it a landmark project that set as proto for all to follow! ♦

Project Name: Delhi Metro Rail Corporation
Location 1 : Gurgaon – Delhi corridor, 15 Stations, QTY : 570 MT
Location 2 : Noida – Delhi corridor, 16 Stations, QTY : 277 MT
Solution : Roofing Solutions
Products Used : Colorbond® steel TRIMDEK® 1015, 'Z' type Purlins