TATA ELXSI

CASE STUDY

Lighting System Engineering

Interior and exterior lighting for improved customer safety and movement

BACKGROUND AND CHALLENGE

The client struggled to finalise the emergency lighting architecture, automatic light intensity modulation, and headlight aiming calibration. There were also issues around predictive maintenance and meeting weight targets.

SCOPE OF WORK

- Build the concept and preliminary design of the lighting system
- Design the lighting system in detail and take it to realisation
- Manage supplier engagement
- Ensure technical compliance and response
- Make engineering changes

SOLUTION

- Developed a fire-safe lighting design solution
- Optimised performance of ambient light sensors
- Developed the headlight aiming procedure
- Created the end-of-life fault signal generation design
- Optimised light module fixation methodology

IMPACT

- Improved passenger safety and energy savings
- Higher visibility for the train operators
- Better maintenance and reduced weight
- Enhanced, watertight lighting system design

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