



**Alstom Transport India Limited,
Kolkata**

**Case Study :
Deep Dive Safety audit for Accident
elimination/optimization**

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Agenda

1. Business Overview & ATIL Kolkata

2. Case Study



01

Business Overview & ATIL Kolkata

Business Overview

Rolling Stock & Components



People Mover & Monorail

Light Rail

Metro

Suburban

Regional & Intercity

High-speed & Very high-speed

Locomotives

Components

Digital & Integrated Systems



Urban Signalling

Mainline Signalling

Turnkey

Smart Mobility

Cybersecurity

Signalling & Infrastructure Services

Infrastructure & Telecom

Services



Rolling Stock Maintenance

Asset Life Management

Parts & Component Overhauls

Digital Solutions

Train Operations & System Maintenance



Over
70,000
employees
worldwide



CAPABILITIES

- Rolling Stock (Urban & Mainline)
- Signalling & Digital Mobility
- Systems
- Infrastructure



INDUSTRIAL FOOT PRINT

- Madhepura: Mainline Rolling Stock (Electric Locomotives)
- Sricity: Urban Rolling Stock
- Savli: Rolling Stock & Bogies
- Coimbatore: Traction & Equipment
- Maneja: Propulsion Equipment
- Kolkata: Car Body Shells



ENGINEERING CENTRES

- Bengaluru
- Hyderabad

E-LOCO Projects (CBS)



KEY PROJECTS IN PROGRESS

- **Alstom & Indian Railway JV:** 800 electric locomotives and associated long-term maintenance for a period of 13 years
- **Delhi - Meerut RRTS:** 210 commuter metro cars and installing India's first ETCS Level 2 system for a mainline project
- **Mumbai Metro Line 3:** 248 metro cars and equipping the latest CBTC signalling technology

ONGOING PROJECTS - URBAN ROLLING STOCK

- Mumbai Metro Line 3 (248 metro cars)
- Montreal Metro (212 metro cars)
- Sydney Metro City & Southwest Extension (138 metro cars)
- Perth Metro (252 Car Body Shells)
- Agra - Kanpur Metro (201 metro cars)
- Mumbai Metro Line 4 & 4A (234 Metro cars)

Car Body shell for E-Loco

Wt: 22 T (one segment)

Dim: 18m x 3.2 m x 3.5 m



02

Case Study

Alstom Zero Deviation Plan (12 Directives)



ZERO
Severe Accidents

ZERO Deviations
in High-Risk Activities

ZERO Tolerance
on deviation
to the Alstom Safety Directives

Alstom Zero Deviation Plan

LIFE SAVING RULES

KNOW THEM,
APPLY THEM,
LIVE THEM.

ZERO DEVIATIONS

RISK MANAGEMENT



Assess and control risk before starting work

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

CONTROL OF CONTRACTORS



Contractors shall apply Alstom safety rules

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

LOCKOUT TAGOUT



One person, one lock, one key

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

ELECTRICAL SAFETY



Check absence of voltage before working on electrical parts

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

Alstom Zero Deviation Plan

LIFE SAVING RULES

KNOW THEM,
APPLY THEM,
LIVE THEM.

ZERO DEVIATIONS

MACHINE SAFETY



Prevent access to dangerous parts

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

RAIL VEHICLE MOVEMENT



Maintain a safe distance from operating vehicles

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

WORK AT HEIGHT



Hook on when there is a risk of falling

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

EXCAVATION WORKS



Protect any excavations or floor openings

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

Alstom Zero Deviation Plan

LIFE SAVING RULES

KNOW THEM,
APPLY THEM,
LIVE THEM.

ZERO DEVIATIONS

LIFTING OPERATIONS



Maintain a safe distance from suspended loads

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

SITE VEHICLE MOVEMENT



Maintain a safe distance from operating vehicles

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

CONFINED SPACES



Enter only with permit to work

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

ZERO DEVIATIONS

HAZARDOUS MATERIAL



Appropriate storage, use and disposal of hazardous substances

KNOW THEM,
APPLY THEM,
LIVE THEM.

Environment, Health & Safety

ALSTOM

Case Study: Deep Dive Safety audit for Accident elimination/optimization

Alstom Transport Kolkata Unit producing Car Body shell for E-Loco. During production, High risk activities like Heavy Fabrication, Lifting, Shot blasting & Painting are involved in the process.

1. **Problem:** During the FY:20-21 there were work related injury is reported. This was an alarming situation for ATIL Management.
2. **Solution:** To eliminate work related incidents , ATIL Management had taken the following steps.
 - a) Deep dive safety audit with Cross functional team (EHS + Production + Industrial Team+ Shop floor Associates)
 - b) Identification of Major/minor Safety gap related to day-to-day activities
 - c) Categorization of gaps and immediate action plan (mitigation action & elimination action).
 - d) Weekly review with Management
3. **Results :**
 - a) Zero Accident in last two financial years (880 days without LTA)
 - b) 2.6 M safe manhours achievement
 - c) AZDP (Safety compliances) – 96 %

EHS Journey- ATIL Kolkata (Sep'19- Aug'23)

2.7 M Safe Manhours

918 days without LTA

