

BRIDGE AND ROOF COMPANY (INDIA) LIMITED

(A Government of India Enterprise)



QUALITY ASSURANCE PLAN (QAP)

Bridge And Roof operates under a comprehensive, RDSO-Model Quality Assurance Plan (QAP) tailored for high-performance railway engineering. Our structural workshop follow a stringent "Zero Tolerance for Defects" policy to ensure total safety and structural integrity.

1. Material Management & Traceability

- **Approved Sourcing:** All raw steel, welding consumables, and hardware are procured exclusively from RDSO-approved primary producers.
- **MTC Verification:** Material Test Certificates (MTC) are strictly verified against physical batches after entry at workshop and before production begins.
- **Component Traceability:** Every steel plate and girder is stamped with unique heat numbers for end-to-end traceability throughout its lifecycle.

2. In-Process Quality Controls


- **WPS & WPQR Compliance:** All welding operations strictly follow qualified Welding Procedure Specifications (WPS) and Welder Performance Qualification Records (WPQR).
- **Non-destructive Testing (NDT):** Joint integrity is verified using advanced NDT methods, including Ultrasonic Testing (UT), Magnetic Particle Testing (MPT), and Radiographic Testing (RT).
- **Precision Jig Fabrication:** Heavy structural components are assembled using dedicated master jigs to guarantee perfect dimensional tolerances as per RDSO drawings.

3. Surface Treatment & Corrosion Protection

- **Grit/Shot Blasting:** Steel surfaces are blast-cleaned to Sa 2.5 or Sa 3 standards to ensure optimal paint and metallization adhesion.
- **Advanced Coating:** Modern multi-coat epoxy and polyurethane paint systems are applied in temperature-controlled environments to resist severe weather.
- **Metal Spraying:** Specialized zinc/aluminium metallization is executed precisely to prevent corrosion on bridge girders.

4. Final Inspection & Documentation

- **Pre-Inspection Audits:** Internal Quality Control (QC) teams conduct thorough pre-inspections before inviting RDSO inspectors.
- **Joint Inspection Protocols:** Final dimensional, structural, and alignment clearances are recorded jointly with official railway authorities.
- **Quality Records Maintenance:** Comprehensive "Quality Assurance Registers" are archived digitally for structural health monitoring.


26.06.2026

(RAJESH KUMAR SINGH)
CHAIRMAN AND MANAGING DIRECTOR

Date : 26.06.2026