APPENDIX A2 STRUCTURAL INSPECTION FOR RUBBER TIRE GANTRY QTY 10 UNITS

INSPECTION AREAS

1) TROLLEY GIRDER

ITEM	DESCRIPTION	FCM/ NFCM
A	Full length external examination included location of any welded joints.	FCM
B	Examination of rail support beam and support.	FCM
C	Trolley rail connection to girder. Full length. Check locations where there are internal diaphragms.	NFCM
D	External overall from Trolley Structure.	FCM
E	Inspection of structure where there are internal structures e.g. diaphragms or stiffeners for corrosion. Internal examination will only be undertaken if there is safe access e.g. manholes.	NFCM

2) TROLLEY GIRDER END / PIPE BRACE

ITEM	DESCRIPTION	FCM/ NFCM
A	Full length external examination included location of any welded joints.	NFCM
B	Examination of the girder connections to the leg.	NFCM
C	Inspection of structure where there are internal structures e.g. diaphragms or stiffeners for corrosion. Internal examination will only be undertaken if there is safe access e.g. manholes and sufficient internal space.	NFCM

3) LEGS

ITEM	DESCRIPTION	FCM/NFCM
A	Full length external examination included location of any welded joints.	NFCM
B	Full length external examination for corrosion where there are internal diaphragms.	NFCM
C	Connections to trolley girder beams, sill beams and leg	NFCM

4) SILL BEAM

ITEM	DESCRIPTION	FCM/ NFCM
A	Full length external Structure examination.	NFCM
B	Inspection of structure where there are Internal diaphragm for Cracks / Corrosion.	NFCM
C	Examination of the connection to the legs and gantry yokes.	NFCM

5) GANTRY BOGIE

ITEM	DESCRIPTION	FCM/ NFCM
A	Examination of the equalizer structure and bogie structures.	NFCM
B	Attachment of welded pieces for pivot pins.	NFCM
C	Bores and pivot pins (when wear is observed on pin connection).	NFCM
D	Examination of motor and gearbox mounting bases.	NFCM

6) TROLLEY

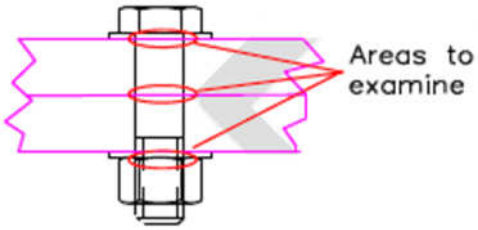
ITEM	DESCRIPTION	FCM/ NFCM
A	Inspection of the trolley top structure, and the platform to the cab	FCM
B	Examination of the mounts for the trolley wheels and the connection to the trolley.	NFCM
C	Inspection of the plinths for the motors, gearboxes and brakes, sheave mounts.	FCM
D	Examination of the structure from the underside, attention paid to welded joints.	FCM
E	Examination of the operator cabin mount arrangement.	FCM

7) HEADBLOCK / SPREADER / MAST / FORK

ITEM	DESCRIPTION	FCM/ NFCM
A	Examination of the Structure. Longitudinal beams, end beams, gusset locations, stiffener locations.	FCM
B	Examination of the end beams, particularly adjacent to the twist-locks.	FCM
C	Inspection around any welds of attachments.	NFCM
D	Inspection of sheave pin bores for wear (eg. gaps).	FCM

8) BOLTED JOINTS

ITEM	DESCRIPTION	FCM/ NFCM
A	Structure	
A1	Bolts and nuts will be inspected without dismantling any joints for defects such as corrosion. 10% of bolts will be torque tested for tightness.	NFCM
A2	At least three bolts shall be randomly selected and removed for detailed inspection	NFCM



9) SURFACE PROTECTION & CORROSION

While examining the areas described in the preceding sections, an assessment of the paint condition and corrosion shall be made.

Areas susceptible to corrosion are those close to welded connections, with welded attachments (even if the attachments have been removed), around bolts and where water is likely to collect.

If the paint appears intact, or only the top coat has been damaged, no further action is necessary.

For corroded areas with pits deeper than 1mm, further investigation, such as UT, paint thickness tests and checks on the area/volume of loss of parent material, is necessary before determining the repair methods.

Examples of Inspection Areas

Trolley Girder Trolley Girder End / Pipe Legs and Connections Sill beam Gantry Bogie Trolley Structure Headblock / Spreader	Rubber Tyre Gantry Crane (RTG)