



INSPECTION DEPARTMENT
Main Tower Expansion Joints North & South
DATE. 2014.08.11

(E2.1 Bridge)
REPORT No 442
MAIN SPAN EXPANSION JOINTS N & S

DATE: 11.08.14

A visual inspection of the North and South Main Tower Expansion Joints was carried out on the above date and the general information and current status is as follows:

Structural Steelwork: All steelwork remains in a satisfactory condition.

Fixings: The protective covering at time of inspection was showing evidence of breakdown with medium to heavy corrosion on the bolt heads. All other associated fixings are satisfactory and remain secure and intact.

Expansion Plate Failsafe System: All the plate failsafe system trains remain satisfactory with all relevant fixings secure and functioning properly; these continue to be inspected on a monthly basis.

Pins, Springs & Bushes: The pins and bushes located in the plate ends are still continuing to show signs of deterioration. Since time of last inspection, springs located at MW6 (NMT) and SW1 (SMT) which have been replaced. There are currently 2 no. springs waiting to be replaced at SE5 (NMT) and ME3 (SMT), these are currently with the Maintenance Supervisor to programme the works. Some of the springs have evidence of paint breakdown but remain in a satisfactory state.

Surface Plates: Cracked weld located on perimeter plate ME2 – NMT has been repaired since time of last inspection; all other surface plates remain in a satisfactory condition.

Spring Dimensions: Spring dimensions were taken on all Rocker and Tongue plate springs; these remain satisfactory. There is still evidence of paint breakdown on the springs. (Survey Sheets Attached)

Bridge Inspectors:



INSPECTION DEPARTMENT
South main tower Main tower expansion joint spring checks
DATE. 2014. 08. 11.

DIMENSION OF SPRING CHECK. 11.08.14						
SOUTH EAST (MAINSpan)	ME1	ME2	ME3	ME4	ME5	ME6
ROCKER PLT. SPRING COMPRESSION DIM.	140 mm	140 mm	136 mm	139 mm	139 mm	140 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	70 mm	70 mm	71 mm	71 mm	70 mm	71 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	69 mm	70 mm	70 mm	71 mm	70 mm	70 mm
DIMENSION OF SPRING CHECK . 11.08.14						
SOUTH EAST (SIDESpan)	SE1	SE2	SE3	SE4	SE5	SE6
ROCKER PLT. SPRING COMPRESSION DIM.	140 mm	141 mm	139 mm	140 mm	139 mm	139 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	70 mm	69 mm	71 mm	68 mm	69 mm	69 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	69 mm	68 mm	76 mm	69 mm	69 mm	69 mm

DIMENSION OF SPRING CHECK . 11.08.14						
SOUTH WEST (MAINSpan)	MW1	MW2	MW3	MW4	MW5	MW6
ROCKER PLT. SPRING COMPRESSION DIM.	140 mm	140 mm	140 mm	139 mm	140 mm	141 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	69 mm	70 mm	69 mm	68 mm	69 mm	70 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	69 mm	70 mm	69 mm	69 mm	69 mm	70 mm
DIMENSION OF SPRING CHECK . 11.08.14						
SOUTH WEST (SIDESpan)	SW1	SW2	SW3	SW4	SW5	SW6
ROCKER PLT. SPRING COMPRESSION DIM.	139 mm	139 mm	139 mm	138 mm	139 mm	138 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	69 mm	68 mm	69 mm	68 mm	68 mm	69 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	70 mm	69 mm	69 mm	68 mm	69 mm	70 mm

NB: SW1 Tongue Plate Replaced since last inspection.

Outstanding this inspection is ME.3 Rocker plate spring to be replaced.



INSPECTION DEPARTMENT
Main Tower expansion joint North Expansion Joint Spring Checks
DATE. 2014.08.11.

DIMENSION OF SPRING PRE-COMPRESSION 11.08.14.						
NORTH EAST (MAINSpan)	ME1	ME2	ME3	ME4	ME5	ME6
ROCKER PLT. SPRING COMPRESSION DIM.	140 mm.	140mm	138mm	140mm	140mm	137mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	72 mm	71mm	71 mm	70 mm	71 mm	70 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	72mm	71 mm	71 mm	71 mm	72 mm	71 mm
DIMENSION OF SPRING CHECK. 11.02.08.						
NORTH EAST (SIDESPAN)	SE1	SE2	SE3	SE4	SE5	SE6
ROCKER PLT. SPRING COMPRESSION DIM.	141mm	136 mm	140 mm	139 mm	138 mm	138 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	68 mm	68 mm	71 mm	65 mm	66 mm	66 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	65mm	67mm	67 mm	65 mm	66 mm	67 mm

DIMENSION OF SPRING PRE-COMPRESSION 11.08.14.						
NORTH WEST (MAINSpan)	MW1	MW2	MW3	MW4	MW5	MW6
ROCKER PLT. SPRING COMPRESSION DIM.	141mm	141 mm	141mm	140 mm	139 mm	140 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	70 mm	71 mm	72 mm	71 mm	70 mm	70 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	70mm	71 mm	72 mm	69 mm	68 mm	71 mm
DIMENSION OF SPRING CHECK 11.08.14.						
NORTH WEST (SIDESPAN)	SW1	SW2	SW3	SW4	SW5	SW6
ROCKER PLT. SPRING COMPRESSION DIM.	141mm	141 mm	141mm	140 mm	139 mm	140 mm
TONGUE PLT. SPRING /E COMPRESSION DIM.	75 mm	75 mm	75 mm	76 mm	76 mm	79 mm
TONGUE PLT. SPRING /W COMPRESSION DIM.	74mm	76 mm	76 mm	77 mm	77 mm	75 mm

Still outstanding North east sidespan SE 5. To be replaced.