



INSPECTION DEPARTMENT
Main Tower Expansion Joints North & South
DATE. 2014.02.26

(E2.1 Bridge)
REPORT No 422
MAIN SPAN EXPANSION JOINTS N & S

DATE: 26.02.14

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

Expansion Plate Failsafe System: Regular monthly inspections continue to be carried out with all the plate failsafe system trains remaining satisfactory; all fixings are secure and functioning properly.

Pins, Springs & Bushes: The pins and bushes located in the plate ends still continue to show signs of deterioration. Since last inspection, springs located at MW4, MW6 (NMT) & SE3 (SMT) have been replaced. There are currently 2 no. new springs which have been reported at SE1 & SE4 tongue plates (NMT) which have been passed to the relevant Maintenance Supervisor still awaiting to be replaced. Some of the springs have evidence of paint breakdown but remain in a satisfactory condition.

Surface Plates: Cracked welds which had been located at the following – NMT: perimeter plate ME1 & SMT: perimeter plates SE2, ME3 & MW2 were all recorded and repaired since the last inspection. There is still one repair outstanding at NMT on ME2 perimeter plate, this has been recorded and is programmed for repair; all other surface plates remain in a satisfactory condition.

Spring Dimension: Spring dimension were taken on all Rocker and Tongue Plate springs; these remain satisfactory. At time of inspection there was 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. 02. 26.

DIMENSION OF SPRING CHECK. 26.02.14						
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 . 26.02.14						
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 . 26.02.14						
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 . 26.02.14						
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.	67 mm	69 mm	69 mm	68 mm	69 mm	70 mm

NB: SE3 Tongue Plate Replaced since last inspection.



INSPECTION DEPARTMENT
Main Tower expansion joint North Expansion Joint Spring Checks
DATE. 2014.02.26.

DIMENSION OF SPRING PRE-COMPRESSION						
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						
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						
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						
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

North east tongue plate springs [SE 1.](#) & [SE 4.](#) Found to be broken at time of inspection. Both recorded on individual inspection defect sheets and forwarded to maintenance inspector for repair.