

| INSPECTION DEPART | <b>IMENT</b> |
|-------------------|--------------|
|-------------------|--------------|

North main tower expansion joint . MW.3.

DATE: 21014.10.12.

| ■Inspection Record Sheet:- Mainspan . 2014.10.12 PLATE              | MW3.                   |       |          |
|---|------------------------|-------|----------|
|   | North west main tower. | MW 3. |          |
| Pre & Post removal Dimensional Checks                               |                        |       |          |
| Pre-removal Checks  |                        |       |          |
| Task  |                        | Yes   | No       |
| * Record top side clearance gaps as identified on survey sht 2 of 4 |                        |       |          |
| * Mismatch between adjacent plates, rocker MW 2 - N. 4 mm S. 4 mm   |                        |       |          |
| rocker MW 4 - N. 3 mm. S. 0 mm                                      |                        |       |          |
| Slide plate No. 1 MW 2 - 3 mm C                                     | entre                  | ✓     |          |
| Slide plate No.1 MW 4 - 3 mm C                                      | entre                  | ✓     |          |
| Tongue plate MW 2 – N 11 mm   | .S.8mm                 | ✓     |          |
| Tongue plate MW 4 – N 10 mm   |                        | ✓     |          |
| * Spring lengths:- rocker plate:- 150mm                             |                        |       |          |
| * Spring lengths:- tongue plate:- east. 82 mm West. 82mm            |                        |       |          |
| Mismatch between adjacent plates                                    |                        |       |          |
| Main span end trimmer & rocker plate:- east.12 mm west. 8           | Bmm                    |       |          |
| Post Removal Checks   |                        |       | 1        |
| Task  |                        |       | No       |
| Slide plate cam radius:- As per drawing                             |                        |       | ✓        |
| * Bush wall thickness: (5) mm (6) mm (7) mm (8) mm                  |                        |       |          |
| (9) mm (10) mm (11) mm (12) mm (13) mm (14) mm . R                  | efer to page 3         |       |          |
| *Radius girder wear plate thickness:- As per drawing.               |                        |       | ✓        |
| * Tongue plate radius length:- As per drawing.                      |                        |       | ✓        |
| * Tongue plate end thickness:- Worn to nothing                      |                        |       |          |
|   |                        |       |          |
| Remedial & Completion Che   | ecks I                 | Yes   |          |
| Task  |                        |       | No       |
| * Top side clearance gaps (complete sheet 3 of 4)                   |                        |       | <b>√</b> |
| * Pins and bushes replaced:- No pins or bushes replaced .           |                        |       | •        |
| *Springs and pins replaced:- Yes. Tongue springs & Rocker spring    |                        |       |          |
| * Spring lengths:- rocker plate:- 150 mm                            |                        |       |          |
| *Spring lengths:- tongue plate:- East. 82 mm West. 82 mm            | 1                      |       |          |
| * Complete comment sheet 4 of 4 (if required) Inspected by: .       | Date: 2014.10.12.      |       |          |
| mapedied by   | Date. 2014.10.12.      |       |          |

## Note.:

Spring sizes. Rocker 150 mm. Tongue plate E & W 82mm

Pre- removal.: Rocker plate spring. = 139 mm. Tongue plate springs (E) 71mm (W) 71mm Post - removal.: Rocker plate spring. = 139 mm. Tongue plate springs (E) 71mm (W) 71mm Springs compressed by required 11 mm. on replacement of plates.

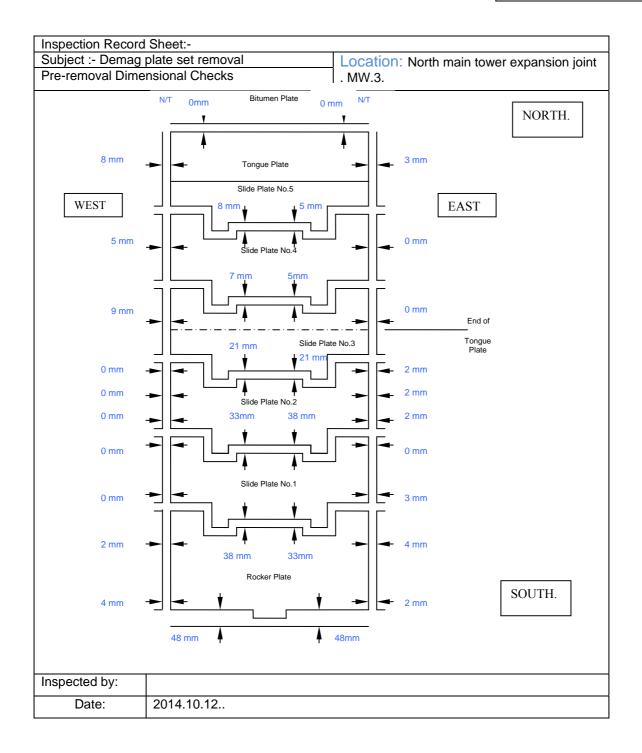
Post removal slide plate cam radius bush wall thickness. Please refer to sheet No 3. For all sizes.

\*\*\* Slide plate cam radius recorded n/ shift 2009.01.16. as 3.785 Metres\*\*\*



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North main tower expansion joint . MW.3.

DATE: 21014.10.12.

Inspection Record Sheet:- Main span NW. 2014.10.12.. PLATE MW 3.

Subject:- Demag Plate Set Removal Location:- North west main tower. Mw.3.

| Pin No.           |  | Internal Dia.  | External Dia.   |
|-------------------|--|--|---|
| 5                 |  | 39mm   | 39mm  |
| Bush<br>Thkns     | Тор  | 4mm  | 4mm   |
|                   | Bottom   | 4mm  | 4mm   |
|                   | North  | 4mm  | 4mm   |
|                   | South  | 4mm  | 4mm   |
| Pin No.           |  | Internal Dia.  | External Dia.   |
| 6                 |  | 39mm   | 39mm  |
|                   | Тор  | 3mm  | 4mm   |
| Bush<br>Thkns     | Bottom   | 3mm  | 4mm   |
|                   | North  | 3mm  | 4mm   |
|                   | South  | mm   | 4mm   |
| Р                 | in No.   | Internal Dia.  | External Dia.   |
|                   | 7  | 39mm   | 39mm  |
|                   | Тор  | 3mm  | 2mm   |
| Bush<br>Thkns     | Bottom   | 3mm  | 2mm   |
| us<br>hk          | North  | 3mm  | 2mm   |
| ш ⊢               | South  | 3mm  | 2mm   |
| Р                 | in No.   | Internal Dia.  | External Dia.   |
|                   | 8  | 39mm   | 39mm  |
|                   | Тор  | 3mm  | 4mm   |
| ط<br>Sc           | Bottom   | 3mm  | 3mm   |
| Bush<br>Thkns     | North  | 3mm  | 4mm   |
| ш –               | South  | . 3mm.   | 3mm   |
| P                 | lin 9070 Cili  | Internal Dia   | External Dia  |
| P                 | South<br>in No.  | Internal Dia.  | External Dia.   |
| P                 | 9  | 39mm   | 39mm  |
|                   | 9<br>Top   | 39mm<br>2mm  | 39mm<br>2mm   |
| ush<br>hkns       | 9<br>Top<br>Bottom   | 39mm<br>2mm<br>2mm   | 39mm<br>2mm<br>2mm  |
| Bush<br>Thkns     | 9<br>Top<br>Bottom<br>North  | 39mm<br>2mm<br>2mm<br>1mm  | 39mm<br>2mm<br>2mm<br>2mm   |
|                   | 9<br>Top<br>Bottom<br>North<br>South   | 39mm<br>2mm<br>2mm<br>1mm<br>2mm   | 39mm<br>2mm<br>2mm<br>2mm<br>1mm  |
|                   | 9<br>Top<br>Bottom<br>North  | 39mm<br>2mm<br>2mm<br>1mm<br>2mm<br>Internal Dia.  | 39mm 2mm 2mm 2mm 1mm External Dia.  |
|                   | 9 Top Bottom North South   | 39mm<br>2mm<br>2mm<br>1mm<br>2mm<br>Internal Dia.<br>39mm  | 39mm<br>2mm<br>2mm<br>2mm<br>1mm  |
| Р                 | 9 Top Bottom North South in No. 10 Top   | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm   |
| Р                 | 9 Top Bottom North South in No. 10 Top Bottom  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm   |
|                   | 9 Top Bottom North South in No. 10 Top Bottom North  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm   |
| Bush<br>Thkns     | 9 Top Bottom North South in No. 10 Top Bottom North South  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm 2mm 2mm  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm   |
| Bush<br>Thkns     | 9 Top Bottom North South Pin No. 10 Top Bottom North South Fin No. 11 Top Bottom North South Fin No.   | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm   |
| Bush<br>Thkns     | 9 Top Bottom North South Pin No. 10 Top Bottom North South Fin No. 11 Top Bottom North South Fin No.   | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 1mm 2mm 1mm 2mm Internal Dia.  | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia.   |
| Bush<br>Thkns     | 9 Top Bottom North South Pin No. 10 Top Bottom North South South Tin No. 11 Top Bottom Bottom  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 1mm 2mm 1mm 2mm Internal Dia. 39mm 2mm   | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 0mm 2mm 1mm External Dia. 39mm 1mm  |
| Bush<br>Thkns     | 9 Top Bottom North South Pin No. 10 Top Bottom North South South Tin No. 11 Top Bottom Bottom  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 1mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 0mm   | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia.   |
| Bush Bush Thkns - | 9 Top Bottom North South in No. 10 Top Bottom North South in No. 11 Top Bottom North South in No. 11 Top Bottom North South South South South South South South South                        | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 1mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 2mm 2mm 2mm 2mm 2mm 2mm   | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 1mm External Dia.  |
| Bush Bush Thkns - | 9 Top Bottom North South Pin No. 10 Top Bottom North South Pin No. 11 Top Bottom North No. 11 Top Bottom North No.   | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm Internal Dia. 39mm Internal Dia. 39mm Internal Dia.   | 39mm 2mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 2mm 1mm 2mm 2mm 1mm 2mm 1mm 2mm  |
| Bush Bush Thkns - | 9 Top Bottom North South Pin No. 10 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 111 Top Bottom North South Pin North South Pin No. 12 | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm Internal Dia. 39mm Internal Dia. 39mm Internal Dia.   | 39mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 1mm External Dia. 39mm 2mm 0mm 2mm 0mm 2mm 0mm   |
| Bush Bush Thkns - | 9 Top Bottom North South Pin No. 10 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 111 Top Bottom North South Pin North South Pin No. 12 | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 2mm 1mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 0mm 0mm N//T  | 39mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 1mm External Dia. 39mm 2mm 1mm External Dia. 39mm 1mm 2mm 2mm 2mm 2mm 2mm 2mm                            |
| Bush Bush Thkns - | 9 Top Bottom North South in No. 10 Top Bottom North South in No. 11 Top Bottom North South in No. 11 Top Bottom North South in No.   | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm Internal Dia. 39mm 7mm 1mm 1mm 1mm 1nternal Dia. 39mm 7mm 1mm 1mm 2mm 1mm 2mm 1mm 2mm 39mm 2mm 39mm 39mm 39mm 39mm 39mm | 39mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 1mm External Dia. 39mm 1mm External Dia. 39mm 1mm 2mm 2mm 2mm 2mm 2mm 39mm 39mm 2mm 2mm 39mm 2mm 39mm 39 |
| Bush Bush Thkns - | 9 Top Bottom North South Pin No. 10 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 11 Top Bottom North South Pin No. 12 Top  | 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm 2mm 1mm 2mm Internal Dia. 39mm 2mm Internal Dia. 39mm 2mm Internal Dia. 39mm 2mm 2mm 0mm N//T Internal Dia. 39mm 0mm N//T Omm                              | 39mm 2mm 2mm 1mm External Dia. 39mm 2mm 0mm 2mm 1mm External Dia. 39mm 1mm External Dia. 39mm 1mm 2mm 2mm 0mm 2mm 2mm 2mm 2mm 2mm 2mm 2   |

| Oddiii        |        | 2111111       | OHIIII        |  |
|---------------|--------|---------------|---------------|--|
|               |        |               |               |  |
| Pin No.       |        | Internal Dia. | External Dia. |  |
| 13            |        | 39mm          | 39mm          |  |
| Bush<br>Thkns | Тор    | 1mm           | 0mm           |  |
|               | Bottom | 1mm           | 0mm           |  |
|               | North  | 0mm           | 0mm           |  |
|               | South  | 1mm           | 0mm           |  |
| Pin No.       |        | Internal Dia. | External Dia. |  |
| 14            |        | 39mm          | 39mm          |  |
| Bush<br>Thkns | Тор    | 1mm           | 0mm           |  |
|               | Bottom | 1mm           | 1mm           |  |
|               | North  | 0mm           | 1mm           |  |
|               | South  | 1mm           | 0mm           |  |

INT EXT INT EXT WEST **EAST** - 9 - 8.9 -7.6 - 9 000 000 8 000 90 000 - 6 -8.4 -7.5 -9.6 000 000 000 10 9 000 000 000 -5 - 4.2 -3.4 - 6.6 000 000 12 11 000 000 000 -2.5 -1.2 - 2.7 - 3.7 000 000 000 00 14 13 000 000 -1 -1 000 000 000 000

Radius girder wear down locations and Depression sizes are shown in mm.

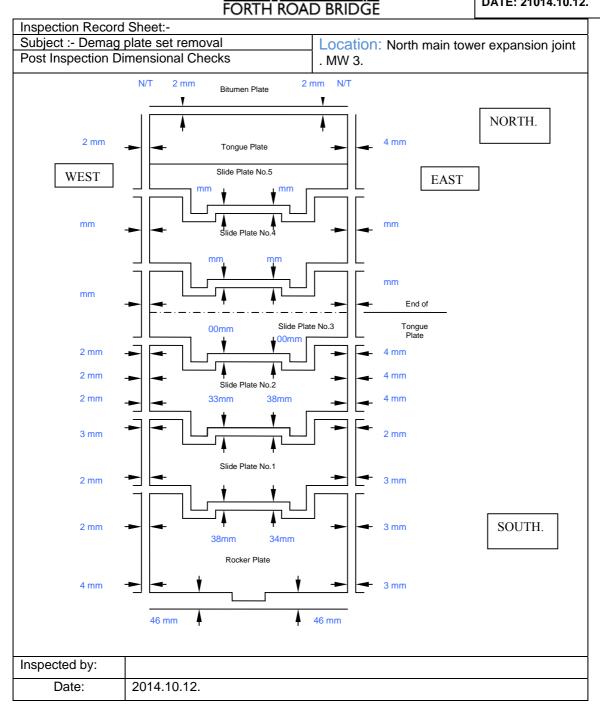


DENOTES DEPTH OF WEAR



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DATE: 21014.10.12.



Note.: Radius arm wear-down measurements on plate MW 3. Recorded by Mr. Steven Jones. Of Atkins, consultants.

Bridge Inspector G.Elliott.



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Bridge Inspector G.Elliott.