



रेल डिब्बा कारखाना, कपूरथला  
Rail Coach Factory , Kapurthala

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**ROLLING STOCK CERTIFICATE**

Form No. : QMF 9454; Version: 1

|     |   |                                |  |                                |                     |               |
|-----|---|--------------------------------|--|--------------------------------|---------------------|---------------|
| 1.  | SHELL No.   | 4010                           | DISPATCH DATE  |                                |                     | 13.8.204      |
| 2.  | Railway   | NR                             | Type   | LWLRRM                         | Coach No.           | 13860         |
| 3.  | Booked to   | SSE/C&W/NDLS                   |  |                                |                     |               |
| 4.  | Tare Weight of Coach  | 53.4 T                         |  |                                |                     |               |
| 5.  | Carrying Capacity   | Seating                        | NIL  | Sleeping                       | NIL                 | Luggage 3.9 T |
| 6.  | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') |                                |  |                                |                     |               |
|     | 6.1   | Leading Dimensions:            |  |                                |                     |               |
|     | i)  | Maximum length over Body       | 23700+10/-0 mm   |                                |                     |               |
|     | ii)   | Maximum width over Body        | 3240-8/+0 mm, 3050 mm (LWSCZDAC)                         |                                |                     |               |
|     | iii)  | Max. Height From Rail Level    | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) |                                |                     |               |
|     | iv)   | Buffer/CBC Height              | Specified : 1105 +0 /-15 mm                              | 1105                           | 1104                |               |
|     | v)  | Buffer/CBC (Make )             | FAIVELEY   | Fiba Device                    | NA                  |               |
| 7.  | Air Brake Testing:  |                                | Description  | Specified                      | Observed            |               |
|     | 7.1   | Full Brake Application         | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> | 6 –10 sec                      | 6 Sec               |               |
|     |   |                                | Max Pressure in BC                                       | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00                |               |
|     |   |                                | All Brake are applied                                    | OK                             | OK                  |               |
|     | 7.2   | Insensitivity                  | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 | No brake application           | OK                  |               |
|     | 7.3   | Sensitivity                    | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  | Brake must apply               | OK                  |               |
| 8.  | PAINTING DEATAILS:  |                                | TYPE OF PAINT  | MAKE                           | AVERAGE GLOSS VALUE |               |
|     | 8.1   | PAINT                          | PU PAINT   | VIBGYOR                        | 87                  |               |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |                                |                     |               |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |                                |                     |               |
| 9.  | Traceability of Furnishing Items:                                   |                                |  | Make                           |                     |               |
|     | i.  | BRAKE EQUIPMENT                |  |                                | KBI                 |               |
|     | iii.  | CDTS                           |  |                                | AIKON               |               |
|     | iv.   | SEATS/S&B                      |  |                                | AMIR CHAND          |               |
|     | v.  | BODY SIDE DOOR                 |  |                                | JBM, SUKATA         |               |
|     | vi.   | VESTIBULE SLIDING DOOR         |  |                                | JBM                 |               |
|     | vii.  | CREW-GEN & GUARD ROOM DOOR     |  |                                | JBM                 |               |
|     | viii.   | WATER TANKS                    |  |                                | AMIT & KUTEER       |               |
|     | ix  | FUEL TANK                      |  |                                | GAURAV              |               |
|     | x   | UIC VESTIBULE                  |  |                                | KRP                 |               |
|     | Xi  | FLOOR BOARD                    |  |                                | TAYAL               |               |
|     | xii   | PVC FLOORING                   |  |                                | RESPONSIVE          |               |
| 10. |   |                                |  |                                |                     |               |
|     | 10.1  | Modification / Trail (if any): |  |                                |                     | NIL           |
|     | 10.2  | Deviations if any:             |  |                                |                     | NIL           |



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Rail Coach Factory , Kapurthala

|                    |   |                                |                                    |                    |                      |                    |                       |                                     |                  |           |                      |  |
|--------------------|---|--------------------------------|------------------------------------|--------------------|----------------------|--------------------|-----------------------|-------------------------------------|------------------|-----------|----------------------|--|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                | <b>Shell No.</b>                   |                    | <b>Railway</b>       |                    | <b>Type</b>           |                                     | <b>Coach No.</b> |           | <b>Dispatch Date</b> |  |
|                    |   |                                | 4010                               |                    | NR                   |                    | LWLRRM                |                                     | 13860            |           | 28-5-14              |  |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                | <b>LPC-1 PP Side(Guard )</b>       |                    |                      |                    |                       | <b>LPC-II NPP Side (Non guard )</b> |                  |           |                      |  |
|                    | i.  | <b>Bogie No.</b>               | 146355                             |                    |                      |                    |                       | 146354                              |                  |           |                      |  |
|                    | ii.   | <b>Frame No.</b>               | FIAT-2966                          |                    |                      |                    |                       | FIAT-3048                           |                  |           |                      |  |
|                    | iii.  | <b>Bolster No.</b>             | 181-HEI                            |                    |                      |                    |                       | 124-HEI                             |                  |           |                      |  |
|                    | iv.   | <b>Axle No.</b>                | RWF-110040                         |                    | RWF-109590           |                    | W-4708                |                                     | RWF-110184       |           |                      |  |
|                    | v.  | <b>Wheel Dia.</b>              | 915.50                             | 916.00             | 915.00               | 915.50             | 915.00                | 915.00                              | 915.00           | 915.00    | 915.00               |  |
|                    | vi.   | <b>Wheel Disc No.</b>          | 233-51915                          | 271-51908          | 049-63302            | 267-63302          | 320-63301             | 059-63302                           | 179-63302        | 110-63302 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>               | 07347                              | 07344              | 09114                | 08358              | 07356                 | 11696                               | 07698            | 12265     |                      |  |
|                    | viii.   | <b>R.B. Make</b>               | SKF                                |                    | SKF                  |                    | SKF                   |                                     | SKF              |           |                      |  |
|                    | ix.   | <b>RB Type</b>                 | UIC CARTRIDGE TAPER ROLLER BEARING |                    |                      |                    |                       |                                     |                  |           |                      |  |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                |                                    |                    |                      |                    |                       |                                     |                  |           |                      |  |
| <b>Description</b> |   | <b>Secondary 1</b>             |                                    | <b>Secondary 2</b> |                      | <b>Secondary 1</b> |                       | <b>Secondary 2</b>                  |                  |           |                      |  |
|                    |   | Outer                          | Inner                              | Outer              | Inner                | Outer              | Inner                 | Outer                               | Inner            |           |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | G-13-05-047                    | G-13-05-046                        | G-13-05-043        | G-13-05-149          | G-13-4-0647        | G-12-9-221            | G-13-4-0685                         | G-12-9-151       |           |                      |  |
| ii.                | <b>Ht. attest load</b>                              | 508                            | 468                                | 511                | 466                  | 514                | 469                   | 513                                 | 470              |           |                      |  |
| iii.               | <b>Align .deviation</b>                             | 1                              | 17                                 | 4                  | 18                   | 20                 | 18                    | 18                                  | 20               |           |                      |  |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                |                                    |                    |                      |                    |                       |                                     |                  |           |                      |  |
|                    | <b>S no.</b>  | <b>Item</b>                    |                                    |                    | <b>PP Side Bogie</b> |                    | <b>NPP side Bogie</b> |                                     | <b>Make</b>      |           |                      |  |
|                    | i.  | Primary Outer Spring           |                                    |                    | L&S-02-13            |                    | L&S-02-13             |                                     | L&S              |           |                      |  |
|                    | ii.   | Primary inner Spring           |                                    |                    | G-12-5               |                    | G-12-5                |                                     | GF               |           |                      |  |
|                    | iii.  | Primary Damper                 |                                    |                    |                      |                    |                       |                                     | GEREP            |           |                      |  |
|                    | iv.   | Secondary damper               |                                    |                    |                      |                    |                       |                                     | GEREP            |           |                      |  |
|                    | v.  | Lateral Damper                 |                                    |                    |                      |                    |                       |                                     | GEREP            |           |                      |  |
|                    | vi.   | Yaw Damper                     |                                    |                    |                      |                    |                       |                                     | NIL              |           |                      |  |
|                    | vii.  | Brake cylinder & Caliper       |                                    |                    |                      |                    |                       |                                     | KBI              |           |                      |  |
|                    | viii.   | Brake Disc                     |                                    |                    |                      |                    |                       |                                     | KBI              |           |                      |  |
|                    | ix.   | Ball joint Control arm         |                                    |                    |                      |                    |                       |                                     | SGA              |           |                      |  |
|                    | x.  | Lateral Bump stop              |                                    |                    |                      |                    |                       |                                     | GMT              |           |                      |  |
|                    | xi.   | Traction center make           |                                    |                    |                      |                    |                       |                                     | SARITA           |           |                      |  |
|                    | xii.  | Traction lever make            |                                    |                    |                      |                    |                       |                                     | SARITA           |           |                      |  |
|                    | xiii.   | Ball joint traction lever      |                                    |                    |                      |                    |                       |                                     | GMT              |           |                      |  |
|                    | xiv.  | Traction centre elastic        |                                    |                    |                      |                    |                       |                                     | SGA              |           |                      |  |
|                    | xv.   | Secondary rubber pad           |                                    |                    |                      |                    |                       |                                     | TESPAK           |           |                      |  |
|                    | xvi.  | Rubber spring                  |                                    |                    |                      |                    |                       |                                     | GMT              |           |                      |  |
|                    | xvii.   | Anti roll bar make             |                                    |                    |                      |                    |                       |                                     | EMSON            |           |                      |  |
|                    | xviii.  | Ball joint roll link           |                                    |                    |                      |                    |                       |                                     | SARITA           |           |                      |  |
|                    | xix.  | Fork make                      |                                    |                    |                      |                    |                       |                                     | EMSON            |           |                      |  |
| 12.4               | i.  | Modification / Trial (if any): |                                    |                    |                      |                    | NIL                   |                                     |                  |           |                      |  |
|                    | ii.   | Deviations (if any):           |                                    |                    |                      |                    | NIL                   |                                     |                  |           |                      |  |



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### ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|     |   |                                |  |                                |                          |                      |
|-----|---|--------------------------------|--|--------------------------------|--------------------------|----------------------|
| 1.  | SHELL No.   | 4014                           | DISPATCH DATE  |                                |                          | <b>21.8.2014</b>     |
| 2.  | Railway   | NR                             | Type   | <b>LWLRRM</b>                  | Coach No.                | <b>13861</b>         |
| 3.  | Booked to   | <b>SSE/C&amp;W/NDLS</b>        |  |                                |                          |                      |
| 4.  | Tare Weight of Coach  | <b>53.4 T</b>                  |  |                                |                          |                      |
| 5.  | Carrying Capacity   | Seating                        | NIL  | <b>Sleeping</b>                | NIL                      | Luggage <b>3.9 T</b> |
| 6.  | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') |                                |  |                                |                          |                      |
|     | 6.1   | Leading Dimensions:            |  |                                |                          |                      |
|     | i)  | Maximum length over Body       | 23700+10/-0 mm   |                                |                          |                      |
|     | ii)   | Maximum width over Body        | 3240-8/+0 mm, 3050 mm (LWSCZDAC)                         |                                |                          |                      |
|     | iii)  | Max. Height From Rail Level    | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) |                                |                          |                      |
|     | iv)   | Buffer/CBC Height              | Specified : 1105 +0 /-15 mm                              | 1105                           | 1105                     |                      |
|     | v)  | Buffer/CBC (Make )             | <b>FAIVELEY</b>  | <b>Fiba Device</b>             | <b>NA</b>                |                      |
| 7.  | Air Brake Testing:  |                                | Description  | Specified                      | Observed                 |                      |
|     | 7.1   | Full Brake Application         | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> | 6 –10 sec                      | 6 Sec                    |                      |
|     |   |                                | Max Pressure in BC                                       | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00                     |                      |
|     |   |                                | All Brake are applied                                    | OK                             | OK                       |                      |
|     | 7.2   | Insensitivity                  | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 | No brake application           | OK                       |                      |
|     | 7.3   | Sensitivity                    | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  | Brake must apply               | OK                       |                      |
| 8.  | PAINTING DEATAILS:  |                                | TYPE OF PAINT  | MAKE                           | AVERAGE GLOSS VALUE      |                      |
|     | 8.1   | PAINT                          | <b>PU PAINT</b>  | <b>VIBGYOR</b>                 | <b>85.5</b>              |                      |
|     | 8.2   | APPLICATION OF PCN-123         | <b>SATISFACTORY</b>                                      |                                |                          |                      |
|     | 8.3   | INSUALTION                     | <b>SATISFACTORY</b>                                      |                                |                          |                      |
| 9.  | Traceability of Furnishing Items:                                   |                                |  |                                | Make                     |                      |
|     | i.  | BRAKE EQUIPMENT                |  |                                | <b>FAIVELEY</b>          |                      |
|     | iii.  | CDTS                           |  |                                | <b>AIKON</b>             |                      |
|     | iv.   | SEATS/S&B                      |  |                                | <b>GANDHI</b>            |                      |
|     | v.  | BODY SIDE DOOR                 |  |                                | <b>JBM, SUKATA</b>       |                      |
|     | vi.   | VESTIBULE SLIDING DOOR         |  |                                | <b>JBM</b>               |                      |
|     | vii.  | CREW-GEN & GUARD ROOM DOOR     |  |                                | <b>JBM/JBM</b>           |                      |
|     | viii.   | WATER TANKS                    |  |                                | <b>AMIT &amp; KUTEER</b> |                      |
|     | ix  | FUEL TANK                      |  |                                | <b>GAURAV</b>            |                      |
|     | x   | UIC VESTIBULE                  |  |                                | <b>KRP</b>               |                      |
| 10. |   |                                |  |                                |                          |                      |
|     | 10.1  | Modification / Trail (if any): |  |                                |                          | NIL                  |
|     | 10.2  | Deviations if any:             |  |                                |                          | NIL                  |



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Rail Coach Factory , Kapurthala

|                    |   |                                |                                    |                |                      |                  |                                     |             |             |           |
|--------------------|---|--------------------------------|------------------------------------|----------------|----------------------|------------------|-------------------------------------|-------------|-------------|-----------|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                | <b>Shell No.</b>                   | <b>Railway</b> | <b>Type</b>          | <b>Coach No.</b> | <b>Dispatch Date</b>                |             |             |           |
|                    |   |                                | 4014                               | NR             | LWLRRM               | 13861            | 14-7-2014                           |             |             |           |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                | <b>LPC-1 PP Side(Guard )</b>       |                |                      |                  | <b>LPC-II NPP Side (Non guard )</b> |             |             |           |
|                    | i.  | <b>Bogie No.</b>               | 146613                             |                |                      |                  | 146612                              |             |             |           |
|                    | ii.   | <b>Frame No.</b>               | FIAT-2716                          |                |                      |                  | FIAT-2891                           |             |             |           |
|                    | iii.  | <b>Bolster No.</b>             | 124/VT/ASR                         |                |                      |                  | 3574-P                              |             |             |           |
|                    | iv.   | <b>Axle No.</b>                | 125590/377                         |                | RWF-109334           |                  | 126603/480                          |             | 128474/983  |           |
|                    | v.  | <b>Wheel Dia.</b>              | 916.50                             | 916.00         | 915.00               | 915.00           | 917.00                              | 916.50      | 917.00      | 916.50    |
|                    | vi.   | <b>Wheel Disc No.</b>          | 303-10559                          | 071-10533      | 094-51782            | 011-51915        | 066-10533                           | 034-10533   | 128-10559   | 055-10579 |
|                    | vii.  | <b>R.B. Nos.</b>               | 35931                              | 35933          | 34452                | 34398            | 36239                               | 35847       | 35974       | 36550     |
|                    | viii.   | <b>R.B. Make</b>               | TIMKEN                             |                | TIMKEN               |                  | TIMKEN                              |             | TIMKEN      |           |
|                    | ix.   | <b>RB Type</b>                 | UIC CARTRIDGE TAPER ROLLER BEARING |                |                      |                  |                                     |             |             |           |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                |                                    |                |                      |                  |                                     |             |             |           |
| <b>Description</b> |   | Secondary 1                    |                                    | Secondary 2    |                      | Secondary 1      |                                     | Secondary 2 |             |           |
|                    |   | Outer                          | Inner                              | Outer          | Inner                | Outer            | Inner                               | Outer       | Inner       |           |
| i.                 | <b>Make &amp; nos.</b>                              | BPS-2013-16                    | BPS-2013-13                        | BPS-2013-14    | BPS-2013-7           | BPS-2013-18      | BPS-2013-9                          | BPS-2013-54 | BPS-2013-15 |           |
| ii.                | <b>Ht. attest load</b>                              | 510                            | 465                                | 507            | 465                  | 515              | 467                                 | 513         | 469         |           |
| iii.               | <b>Align .deviation</b>                             | 2                              | 2                                  | 4              | 1                    | 2                | 25                                  | 3           | 24          |           |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                |                                    |                |                      |                  |                                     |             |             |           |
|                    | <b>S no.</b>  | <b>Item</b>                    |                                    |                | <b>PP Side Bogie</b> |                  | <b>NPP side Bogie</b>               |             | <b>Make</b> |           |
|                    | i.  | Primary Outer Spring           |                                    |                | BPS-2013             |                  | BPS-2013                            |             | BPS         |           |
|                    | ii.   | Primary inner Spring           |                                    |                | BPS-2013             |                  | BPS-2013                            |             | BPS         |           |
|                    | iii.  | Primary Damper                 |                                    |                |                      |                  |                                     |             | KONI        |           |
|                    | iv.   | Secondary damper               |                                    |                |                      |                  |                                     |             | SACHS       |           |
|                    | v.  | Lateral Damper                 |                                    |                |                      |                  |                                     |             | SACHS       |           |
|                    | vi.   | Yaw Damper                     |                                    |                |                      |                  |                                     |             | NIL         |           |
|                    | vii.  | Brake cylinder & Caliper       |                                    |                |                      |                  |                                     |             | FTI         |           |
|                    | viii.   | Brake Disc                     |                                    |                |                      |                  |                                     |             | KBI         |           |
|                    | ix.   | Ball joint Control arm         |                                    |                |                      |                  |                                     |             | SGA         |           |
|                    | x.  | Lateral Bump stop              |                                    |                |                      |                  |                                     |             | GMT         |           |
|                    | xi.   | Traction center make           |                                    |                |                      |                  |                                     |             | SARITA      |           |
|                    | xii.  | Traction lever make            |                                    |                |                      |                  |                                     |             | SARITA      |           |
|                    | xiii.   | Ball joint traction lever      |                                    |                |                      |                  |                                     |             | GMT         |           |
|                    | xiv.  | Traction centre elastic        |                                    |                |                      |                  |                                     |             | SGA         |           |
|                    | xv.   | Secondary rubber pad           |                                    |                |                      |                  |                                     |             | TESPAK      |           |
|                    | xvi.  | Rubber spring                  |                                    |                |                      |                  |                                     |             | GMT         |           |
|                    | xvii.   | Anti roll bar make             |                                    |                |                      |                  |                                     |             | EMSON       |           |
|                    | xviii.  | Ball joint roll link           |                                    |                |                      |                  |                                     |             | SARITA      |           |
|                    | xix.  | Fork make                      |                                    |                |                      |                  |                                     |             | SARITA      |           |
| 12.4               | i.  | Modification / Trial (if any): |                                    |                |                      |                  |                                     |             | NIL         |           |
|                    | ii.   | Deviations (if any):           |                                    |                |                      |                  |                                     |             | NIL         |           |



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## ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|       |   |  |  |               |                                |                     |
|-------|---|--|--|---------------|--------------------------------|---------------------|
| 1.    | SHELL No.   | 4007   | DISPATCH DATE  |               |                                | 6.8.2014            |
| 2.    | Railway   | NR   | Type   | LWLRRM        | Coach No.                      | 13859               |
| 3.    | Booked to   | SSE/C&W/NDLS   |  |               |                                |                     |
| 4.    | Tare Weight of Coach  | 53.4 T   |  |               |                                |                     |
| 5.    | Carrying Capacity   | Seating  | NIL  | Sleeping      | NIL                            | Luggage 3.9 T       |
| 6.    | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') |  |  |               |                                |                     |
| 6.1   | Leading Dimensions:   |  |  |               |                                |                     |
| i)    | Maximum length over Body  | 23700+10/-0 mm   |  |               |                                |                     |
| ii)   | Maximum width over Body   | 3240-8/+0 mm, 3050 mm (LWSCZDAC)                         |  |               |                                |                     |
| iii)  | Max. Height From Rail Level   | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) |  |               |                                |                     |
| iv)   | Buffer/CBC Height   | Specified : 1105 +0 /-15 mm                              |  |               | 1105                           | 1105                |
| v)    | Buffer/CBC (Make )  | FAIVELEY   |  |               | Fiba Device                    | NA                  |
| 7.    | Air Brake Testing:  |  | Description  |               | Specified                      | Observed            |
| 7.1   | Full Brake Application  |  | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> |               | 6 -10 sec                      | 6 Sec               |
|       |   |  | Max Pressure in BC                                       |               | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00                |
|       |   |  | All Brake are applied                                    |               | OK                             | OK                  |
| 7.2   | Insensitivity   |  | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |               | No brake application           | OK                  |
| 7.3   | Sensitivity   |  | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |               | Brake must apply               | OK                  |
| 8.    | PAINTING DEATAILS:  |  | TYPE OF PAINT  |               | MAKE                           | AVERAGE GLOSS VALUE |
| 8.1   | PAINT   |  | PU PAINT   |               | VIBGYOR                        | 87                  |
| 8.2   | APPLICATION OF PCN-123  |  | SATISFACTORY   |               |                                |                     |
| 8.3   | INSUALTION  |  | SATISFACTORY   |               |                                |                     |
| 9.    | Traceability of Furnishing Items:                                   |  |  |               |                                | Make                |
| i.    | BRAKE EQUIPMENT   |  |  | FAIVELEY      |                                |                     |
| iii.  | CDTS  |  |  | AIKON         |                                |                     |
| iv.   | SEATS/S&B   |  |  | AMIR CHAND    |                                |                     |
| v.    | BODY SIDE DOOR  |  |  | JBM, SUKATA   |                                |                     |
| vi.   | VESTIBULE SLIDING DOOR  |  |  | JBM           |                                |                     |
| vii.  | CREW-GEN & GUARD ROOM DOOR  |  |  | JBM/CONCEPT   |                                |                     |
| viii. | WATER TANKS   |  |  | AMIT & KUTEER |                                |                     |
| ix    | FUEL TANK   |  |  | GAURAV        |                                |                     |
| x     | UIC VESTIBULE   |  |  | KRP           |                                |                     |
| Xi    | FLOOR BOARD   |  |  | TAYAL         |                                |                     |
| xii   | PVC FLOORING  |  |  | RESPONSIVE    |                                |                     |
| 10.   |   |  |  |               |                                |                     |
| 10.1  | Modification / Trail (if any):                                      |  |  | NIL           |                                |                     |
| 10.2  | Deviations if any:  |  |  | NIL           |                                |                     |



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Rail Coach Factory , Kapurthala

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|                    |   |                                       |                                    |             |                      |             |                       |                                     |                  |           |                      |  |
|--------------------|---|---------------------------------------|------------------------------------|-------------|----------------------|-------------|-----------------------|-------------------------------------|------------------|-----------|----------------------|--|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |             | <b>Railway</b>       |             | <b>Type</b>           |                                     | <b>Coach No.</b> |           | <b>Dispatch Date</b> |  |
|                    |   |                                       | 4007                               |             | NR                   |             | LWLRRM                |                                     | 13859/C          |           | 27-6-2014            |  |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>LPC-1 PP Side(Guard )</b>       |             |                      |             |                       | <b>LPC-II NPP Side (Non guard )</b> |                  |           |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 146563                             |             |                      |             |                       | 145562                              |                  |           |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-3193                          |             |                      |             |                       | FIAT-3206                           |                  |           |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 3853-P                             |             |                      |             |                       | 3954-P                              |                  |           |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | 126982/476                         |             | 128978/986           |             | 128385/991            |                                     | 125616/377       |           |                      |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 915.00                             | 915.00      | 915.50               | 915.00      | 915.00                | 915.00                              | 915.00           | 915.00    | 915.00               |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 062-63305                          | 181-63301   | 076-63305            | 159-10582   | 158-63302             | 168-10579                           | 201-63309        | 360-63307 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 34467                              | 34543       | 34341                | 34549       | 34262                 | 34253                               | 34374            | 00372     |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | TIMKEN                             |             | TIMKEN               |             | TIMKEN                |                                     | TIMKEN           |           |                      |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |             |                      |             |                       |                                     |                  |           |                      |  |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |             |                      |             |                       |                                     |                  |           |                      |  |
| <b>Description</b> |   | Secondary 1                           |                                    | Secondary 2 |                      | Secondary 1 |                       | Secondary 2                         |                  |           |                      |  |
|                    |   | Outer                                 | Inner                              | Outer       | Inner                | Outer       | Inner                 | Outer                               | Inner            |           |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | BPS-2013-17                           | BPS-2013-07                        | BPS-2013-11 | BPS-2013-15          | BPS-2013-89 | BPS-2013-24           | BPS-2013-25                         | BPS-2013-05      |           |                      |  |
| ii.                | <b>Ht. attest load</b>                              | 507.5                                 | 463.5                              | 507.5       | 464                  | 515         | 468                   | 510                                 | 465              |           |                      |  |
| iii.               | <b>Align .deviation</b>                             | 9                                     | 3                                  | 7           | 6.5                  | 10          | 19                    | 10                                  | 20               |           |                      |  |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                       |                                    |             |                      |             |                       |                                     |                  |           |                      |  |
|                    | <b>S no.</b>  | <b>Item</b>                           |                                    |             | <b>PP Side Bogie</b> |             | <b>NPP side Bogie</b> |                                     | <b>Make</b>      |           |                      |  |
|                    | i.  | Primary Outer Spring                  |                                    |             | BPS-2013             |             | BPS-2013              |                                     | BPS              |           |                      |  |
|                    | ii.   | Primary inner Spring                  |                                    |             | BPS-2013             |             | BPS-2013              |                                     | BPS              |           |                      |  |
|                    | iii.  | Primary Damper                        |                                    |             |                      |             |                       |                                     | SACHS            |           |                      |  |
|                    | iv.   | Secondary damper                      |                                    |             |                      |             |                       |                                     | SACHS            |           |                      |  |
|                    | v.  | Lateral Damper                        |                                    |             |                      |             |                       |                                     | SACHS            |           |                      |  |
|                    | vi.   | Yaw Damper                            |                                    |             |                      |             |                       |                                     | NIL              |           |                      |  |
|                    | vii.  | Brake cylinder & Caliper              |                                    |             |                      |             |                       |                                     | FTI              |           |                      |  |
|                    | viii.   | Brake Disc                            |                                    |             |                      |             |                       |                                     | KBI              |           |                      |  |
|                    | ix.   | Ball joint Control arm                |                                    |             |                      |             |                       |                                     | SGA              |           |                      |  |
|                    | x.  | Lateral Bump stop                     |                                    |             |                      |             |                       |                                     | GMT              |           |                      |  |
|                    | xi.   | Traction center make                  |                                    |             |                      |             |                       |                                     | SARITA           |           |                      |  |
|                    | xii.  | Traction lever make                   |                                    |             |                      |             |                       |                                     | SARITA           |           |                      |  |
|                    | xiii.   | Ball joint traction lever             |                                    |             |                      |             |                       |                                     | GMT              |           |                      |  |
|                    | xiv.  | Traction centre elastic               |                                    |             |                      |             |                       |                                     | SGA              |           |                      |  |
|                    | xv.   | Secondary rubber pad                  |                                    |             |                      |             |                       |                                     | TESPAK           |           |                      |  |
|                    | xvi.  | Rubber spring                         |                                    |             |                      |             |                       |                                     | GMT              |           |                      |  |
|                    | xvii.   | Anti roll bar make                    |                                    |             |                      |             |                       |                                     | EMSON            |           |                      |  |
|                    | xviii.  | Ball joint roll link                  |                                    |             |                      |             |                       |                                     | SARITA           |           |                      |  |
|                    | xix.  | Fork make                             |                                    |             |                      |             |                       |                                     | SARITA           |           |                      |  |
| 12.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |             |                      |             | NIL                   |                                     |                  |           |                      |  |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |             |                      |             | NIL                   |                                     |                  |           |                      |  |

LPC-4007



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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|       |   |         |                            |  |             |                                |                     |
|-------|---|---------|----------------------------|--|-------------|--------------------------------|---------------------|
| 1.    | SHELL No.   | 4015    | DISPATCH DATE              |  |             |                                | 20.10.2014          |
| 2.    | Railway   | NR      | Type                       | LWLRRM   | Coach No.   |                                | 13862               |
| 3.    | Booked to   |         |                            | SSE/C&W/NDLS   |             |                                |                     |
| 4.    | Tare Weight of Coach  |         |                            | 53.4 T   |             |                                |                     |
| 5.    | Carrying Capacity   | Seating | NIL                        | Sleeping   | NIL         | Luggage                        | 3.9 T               |
| 6.    | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') |         |                            |  |             |                                |                     |
| 6.1   | Leading Dimensions:   |         |                            |  |             |                                |                     |
| i)    | Maximum length over Body  |         |                            | 23700+10/-0 mm   |             |                                |                     |
| ii)   | Maximum width over Body   |         |                            | 3240-8/+0 mm, 3050 mm (LWSCZDAC)                         |             |                                |                     |
| iii)  | Max. Height From Rail Level   |         |                            | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) |             |                                |                     |
| iv)   | Buffer/CBC Height   |         | Specified : 1105 +0/-15 mm |  | 1105        | 1105                           |                     |
| v)    | Buffer/CBC (Make )  |         | FAIVELEY                   |  | Fiba Device | NA                             |                     |
| 7.    | Air Brake Testing:  |         |                            | Description  |             | Specified                      | Observed            |
| 7.1   | Full Brake Application  |         |                            | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> |             | 6 -10 sec                      | 6 Sec               |
|       |   |         |                            | Max Pressure in BC                                       |             | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00                |
|       |   |         |                            | All Brake are applied                                    |             | OK                             | OK                  |
| 7.2   | Insensitivity   |         |                            | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |             | No brake application           | OK                  |
| 7.3   | Sensitivity   |         |                            | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |             | Brake must apply               | OK                  |
| 8.    | PAINTING DEATAILS:  |         |                            | TYPE OF PAINT  |             | MAKE                           | AVERAGE GLOSS VALUE |
| 8.1   | PAINT   |         |                            | PU PAINT   |             | VIBGYOR                        | 87                  |
| 8.2   | APPLICATION OF PCN-123  |         |                            | SATISFACTORY   |             |                                |                     |
| 8.3   | INSUALTION  |         |                            | SATISFACTORY   |             |                                |                     |
| 9.    | Traceability of Furnishing Items:                                   |         |                            |  |             |                                | Make                |
| i.    | BRAKE EQUIPMENT   |         |                            |  |             |                                | FAIVELEY            |
| iii.  | CDTS  |         |                            |  |             |                                | AIKON               |
| iv.   | SEATS/S&B   |         |                            |  |             |                                | GANDHI              |
| v.    | BODY SIDE DOOR  |         |                            |  |             |                                | JBM, SUKATA         |
| vi.   | VESTIBULE SLIDING DOOR  |         |                            |  |             |                                | JBM                 |
| vii.  | CREW-GEN & GUARD ROOM DOOR  |         |                            |  |             |                                | JBM/JBM             |
| viii. | WATER TANKS   |         |                            |  |             |                                | AMIT & KUTEER       |
| ix    | FUEL TANK   |         |                            |  |             |                                | GAURAV              |
| x     | UIC VESTIBULE   |         |                            |  |             |                                | KRP                 |
| XI    | FLOOR BOARD   |         |                            |  |             |                                | TAYAL               |
| XII   | PVC   |         |                            |  |             |                                | RESPONSIVE          |
| 10.   |   |         |                            |  |             |                                |                     |
| 10.1  | Modification / Trail (if any):                                      |         |                            |  |             |                                | NIL                 |
| 10.2  | Deviations if any:  |         |                            |  |             |                                | NIL                 |



|                    |   |                                       |                                    |                    |                      |                    |                       |                                     |                  |            |                      |        |
|--------------------|---|---------------------------------------|------------------------------------|--------------------|----------------------|--------------------|-----------------------|-------------------------------------|------------------|------------|----------------------|--------|
| 12.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |                    | <b>Railway</b>       |                    | <b>Type</b>           |                                     | <b>Coach No.</b> |            | <b>Dispatch Date</b> |        |
|                    |   |                                       | 4015                               |                    | NR                   |                    | LWLRRM                |                                     | 13862            |            | 15-7-2014            |        |
| 12.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>LPC-1 PP Side(Guard )</b>       |                    |                      |                    |                       | <b>LPC-II NPP Side (Non guard )</b> |                  |            |                      |        |
|                    | i.  | <b>Bogie No.</b>                      | 146616                             |                    |                      |                    |                       | 146617                              |                  |            |                      |        |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-3285                          |                    |                      |                    |                       | FIAT-3233                           |                  |            |                      |        |
|                    | iii.  | <b>Bolster No.</b>                    | 3782-GT                            |                    |                      |                    |                       | 3508-GT                             |                  |            |                      |        |
|                    | iv.   | <b>Axle No.</b>                       | 126462/481                         |                    | 125483/477           |                    |                       | 128447/983                          |                  | 125639/377 |                      |        |
|                    | v.  | <b>Wheel Dia.</b>                     | 915.50                             | 915.50             | 915.00               | 915.00             | 916.00                | 916.00                              | 916.00           | 916.00     | 916.00               | 916.00 |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 273-10568                          | 115-11611          | 224-11611            | 084-10568          | 050-11600             | 206-11607                           | 083-10533        | 234-10570  |                      |        |
|                    | vii.  | <b>R.B. Nos.</b>                      | 35747                              | 36468              | 35767                | 35973              | 36099                 | 36202                               | 36344            | 36152      |                      |        |
|                    | viii.   | <b>R.B. Make</b>                      | TIMKEN                             |                    | TIMKEN               |                    |                       | TIMKEN                              |                  | TIMKEN     |                      |        |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |                      |                    |                       |                                     |                  |            |                      |        |
| 12.2               | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |                    |                      |                    |                       |                                     |                  |            |                      |        |
| <b>Description</b> |   | <b>Secondary 1</b>                    |                                    | <b>Secondary 2</b> |                      | <b>Secondary 1</b> |                       | <b>Secondary 2</b>                  |                  |            |                      |        |
|                    |   | Outer                                 | Inner                              | Outer              | Inner                | Outer              | Inner                 | Outer                               | Inner            |            |                      |        |
| i.                 | <b>Make &amp; nos.</b>                              | BPS-2013-19                           | BPS-2012-11                        | BPS-2013-16        | BPS-2012-5           | BPS-2013-16        | BPS-2013-20           | BPS-2013-15                         | BPS-2013-7       |            |                      |        |
| ii.                | <b>Ht. attest load</b>                              | 504                                   | 466                                | 507.50             | 465                  | 514                | 470                   | 510                                 | 471              |            |                      |        |
| iii.               | <b>Align .deviation</b>                             | 3                                     | 9                                  | 2                  | 9.5                  | 2                  | 24                    | 4                                   | 21               |            |                      |        |
| 12.3               | <b>Items traceability:</b>                          |                                       |                                    |                    |                      |                    |                       |                                     |                  |            |                      |        |
|                    | <b>Sno.</b>   | <b>Item</b>                           |                                    |                    | <b>PP Side Bogie</b> |                    | <b>NPP side Bogie</b> |                                     | <b>Make</b>      |            |                      |        |
|                    | i.  | Primary Outer Spring                  |                                    |                    | BPS-2013             |                    | BPS-2013              |                                     | BPS              |            |                      |        |
|                    | ii.   | Primary inner Spring                  |                                    |                    | BPS-2013             |                    | BPS-2013              |                                     | BPS              |            |                      |        |
|                    | iii.  | Primary Damper                        |                                    |                    |                      |                    |                       |                                     | KONI             |            |                      |        |
|                    | iv.   | Secondary damper                      |                                    |                    |                      |                    |                       |                                     | SACHS            |            |                      |        |
|                    | v.  | Lateral Damper                        |                                    |                    |                      |                    |                       |                                     | SACHS            |            |                      |        |
|                    | vi.   | Yaw Damper                            |                                    |                    |                      |                    |                       |                                     | NIL              |            |                      |        |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    |                      |                    |                       |                                     | FTI              |            |                      |        |
|                    | viii.   | Brake Disc                            |                                    |                    |                      |                    |                       |                                     | FTI              |            |                      |        |
|                    | ix.   | Ball joint Control arm                |                                    |                    |                      |                    |                       |                                     | SGA              |            |                      |        |
|                    | x.  | Lateral Bump stop                     |                                    |                    |                      |                    |                       |                                     | GMT              |            |                      |        |
|                    | xi.   | Traction center make                  |                                    |                    |                      |                    |                       |                                     | SARITA           |            |                      |        |
|                    | xii.  | Traction lever make                   |                                    |                    |                      |                    |                       |                                     | SARITA           |            |                      |        |
|                    | xiii.   | Ball joint traction lever             |                                    |                    |                      |                    |                       |                                     | GMT              |            |                      |        |
|                    | xiv.  | Traction centre elastic               |                                    |                    |                      |                    |                       |                                     | SGA              |            |                      |        |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |                      |                    |                       |                                     | TESPAK           |            |                      |        |
|                    | xvi.  | Rubber spring                         |                                    |                    |                      |                    |                       |                                     | GMT              |            |                      |        |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |                      |                    |                       |                                     | EMSON            |            |                      |        |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |                      |                    |                       |                                     | SARITA           |            |                      |        |
|                    | xix.  | Fork make                             |                                    |                    |                      |                    |                       |                                     | SARITA           |            |                      |        |
| 12.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    | NIL                  |                    |                       |                                     |                  |            |                      |        |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    | NIL                  |                    |                       |                                     |                  |            |                      |        |