



रेल डिब्बा कारखाना, कपूरथला  
Rail Coach Factory , Kapurthala

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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|     |   |                                |  |             |                                |          |            |
|-----|---|--------------------------------|--|-------------|--------------------------------|----------|------------|
| 1.  | SHELL No.   | 6039                           | DISPATCH DATE  |             |                                |          | 27.12.2016 |
| 2.  | Railway   | ER                             | Type   | LWSCN1      | Coach No.                      | 16211    |            |
| 3.  | Booked to   |                                | SSE/C&W/HWH  |             |                                |          |            |
| 4.  | Tare Weight of Coach  |                                | 41.239 T   |             |                                |          |            |
| 5.  | Carrying Capacity   | Seating                        | 80   | Sleeping    | 80                             | Luggage  | NIL        |
| 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                              | 1104        | 1103                           |          |            |
|     | v)  | Buffer/CBC (Make )             | ESCORTS  | 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     | 85/87                          |          |            |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |             |                                |          |            |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |             |                                |          |            |
| 9.  | Traceability of Furnishing Items:                                   |                                | Make   |             |                                |          |            |
|     | I   | BRAKE EQUIPMENT                | KBI  |             |                                |          |            |
|     | ii  | SEAT & BERTH                   | SAVITRI  |             |                                |          |            |
|     | lii   | BODY SIDE DOORS                | SUKATA   |             |                                |          |            |
|     | lv  | WATER TANKS                    | SHIVALIK,AMIT  |             |                                |          |            |
|     | v   | FLOOR BOARD                    | TWPL   |             |                                |          |            |
|     | vi  | PVC FLOORING                   | RESPONSIVE   |             |                                |          |            |
|     | vii   | UIC VESTIBULE                  | ESCORT   |             |                                |          |            |
|     | viii  | VESTIBULE SLIDING DOOR         | KALSI  |             |                                |          |            |
|     | IX  | BIO TANK                       | RAIL FAB   |             |                                |          |            |
|     | X   | LP SHEET                       | --   |             |                                |          |            |
| 10. |   |                                |  |             |                                |          |            |
|     | 10.1  | Modification / Trail (if any): |  |             |                                | NIL      |            |
|     | 10.2  | Deviations if any:             |  |             |                                | NIL      |            |



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|--------------------|---|---------------------------------------|------------------------------------|--------------------|--|--------------------|--------------|--|------------------|------------|----------------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |                    | <b>Railway</b>                         |                    | <b>Type</b>  |  | <b>Coach No.</b> |            | <b>Dispatch Date</b> |            |
|                    |   |                                       | 6039                               |                    | ER                                     |                    | LWSCN        |  | 16211            |            | 28-11-2016           |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                    |  |                    |              |  | <b>NPP Side</b>  |            |                      |            |
|                    | i.  | <b>Bogie No.</b>                      | 167054                             |                    |  |                    |              |  | 167055           |            |                      |            |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-5311                          |                    |  |                    |              |  | FIAT-5282        |            |                      |            |
|                    | iii.  | <b>Bolster No.</b>                    | 6266-GT                            |                    |  |                    |              |  | 6268-GT          |            |                      |            |
|                    | iv.   | <b>Axle No.</b>                       | K-6531                             |                    |  | R-3329             |              |  | N-0314           |            | N-6770               |            |
|                    | v.  | <b>Wheel Dia.</b>                     | 916.00                             | 916.50             | 917.00                                 | 917.00             | 916.00       | 916.50                                 | 916.00           | 916.00     | 916.00               | 916.00     |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 01556-6QH2                         | 00645-6MG6         | 00149-07198                            | 00041-07200        | 01789-6QL8   | 00635-6MG6                             | 06648-6QH6       | 02670-5RK5 | 06648-6QH6           | 02670-5RK5 |
|                    | vii.  | <b>R.B. Nos.</b>                      | 05447                              | 05784              | 06116                                  | 06344              | 05298        | 05990                                  | 06350            | 06174      | 06350                | 06174      |
|                    | viii.   | <b>R.B. Make</b>                      | TIMKEN                             |                    |  | TIMKEN             |              |  | TIMKEN           |            | TIMKEN               |            |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |  |                    |              |  |                  |            |                      |            |
| 11.2               | <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>                     |                  |            |                      |            |
|                    |   | <b>Outer</b>                          | <b>Inner</b>                       | <b>Outer</b>       | <b>Inner</b>                           | <b>Outer</b>       | <b>Inner</b> | <b>Outer</b>                           | <b>Inner</b>     |            |                      |            |
| i.                 | <b>Make &amp; nos.</b>                              | GBD-16-7-14                           | RSK-15-4-873                       | GBD-16-7-07        | RSK-15-4-876                           | GBD-16-7-23        | RSK-15-4-606 | GBD-16-7-28                            | RSK-15-4-874     |            |                      |            |
| ii.                | <b>Ht. at test load</b>                             | 516                                   | 472                                | 516                | 471                                    | 516                | 469          | 516                                    | 472              |            |                      |            |
| iii.               | <b>Align .deviation</b>                             | 6                                     | 8                                  | 7                  | 9                                      | 7                  | 5            | 9                                      | 5                |            |                      |            |
| 11.3               | <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                  |                                    |                    | GBD-16-8                               |                    |              | GBD-16-8                               |                  |            | GBD                  |            |
|                    | ii.   | Primary inner Spring                  |                                    |                    | RSK-16-2                               |                    |              | RSK-16-2                               |                  |            | RSK                  |            |
|                    | iii.  | Primary Damper                        |                                    |                    | 649,96,284,657                         |                    |              | 352,659,697,496                        |                  |            | GEREP                |            |
|                    | iv.   | Secondary damper                      |                                    |                    | 230,301                                |                    |              | 04,196                                 |                  |            | GEREP                |            |
|                    | v.  | Lateral Damper                        |                                    |                    | 0436                                   |                    |              | 0484                                   |                  |            | SV                   |            |
|                    | vi.   | Yaw Damper                            |                                    |                    |  |                    |              |  |                  |            | NIL                  |            |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    | 4213/691,4079/691<br>4215/691,4282/691 |                    |              | 4214/691,4077/691<br>4216/691,4078/691 |                  |            | KBI                  |            |
|                    | viii.   | Brake Disc                            |                                    |                    |  |                    |              |  |                  |            | FTI                  |            |
|                    | ix.   | Ball joint Control arm                |                                    |                    |  |                    |              |  |                  |            | MGN                  |            |
|                    | x.  | Lateral Bump stop                     |                                    |                    |  |                    |              |  |                  |            | GMT                  |            |
|                    | xi.   | Traction center make                  |                                    |                    |  |                    |              |  |                  |            | SARITA<br>EMSON      |            |
|                    | xii.  | Traction lever make                   |                                    |                    |  |                    |              |  |                  |            | SARITA               |            |
|                    | xiii.   | Ball joint traction lever             |                                    |                    |  |                    |              |  |                  |            | SGA                  |            |
|                    | xiv.  | Traction centre elastic               |                                    |                    |  |                    |              |  |                  |            | SGA                  |            |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |  |                    |              |  |                  |            | TECSPACK             |            |
|                    | xvi.  | Rubber spring                         |                                    |                    |  |                    |              |  |                  |            | GMT                  |            |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |  |                    |              |  |                  |            | SARITA               |            |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |  |                    |              |  |                  |            | SARITA               |            |
|                    | xix.  | Fork make                             |                                    |                    |  |                    |              |  |                  |            | EMSON                |            |
| 11.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    |  |                    |              | NIL                                    |                  |            |                      |            |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    |  |                    |              | NIL                                    |                  |            |                      |            |

LWSCN-6039



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Form No. : QMF 9454; Version: 1

|     |   |                                |  |                                |                     |          |            |
|-----|---|--------------------------------|--|--------------------------------|---------------------|----------|------------|
| 1.  | SHELL No.   | 6040                           | DISPATCH DATE  |                                |                     |          | 21.12.2016 |
| 2.  | Railway   | ER                             | Type   | LWSCN1                         | Coach No.           | 16210    |            |
| 3.  | Booked to   |                                | SSE/C&W/HWH  |                                |                     |          |            |
| 4.  | Tare Weight of Coach  |                                | 41.239 T   |                                |                     |          |            |
| 5.  | Carrying Capacity   | Seating                        | 80   | Sleeping                       | 80                  | Luggage  | NIL        |
| 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                           | 1100                |          |            |
|     | v)  | Buffer/CBC (Make )             | ESCORTS  | 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                        | 88/89               |          |            |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |                                |                     |          |            |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |                                |                     |          |            |
| 9.  | Traceability of Furnishing Items:                                   |                                |  | Make                           |                     |          |            |
|     | i   | BRAKE EQUIPMENT                |  | FAIVELEY                       |                     |          |            |
|     | ii  | SEAT & BERTH                   |  | SAVITRY                        |                     |          |            |
|     | iii   | BODY SIDE DOORS                |  | SUKATA                         |                     |          |            |
|     | iv  | WATER TANKS                    |  | AMIT & SHIVALIK                |                     |          |            |
|     | v   | FLOOR BOARD                    |  | TWPL                           |                     |          |            |
|     | vi  | PVC FLOORING                   |  | RESPONSIVE                     |                     |          |            |
|     | vii   | UIC VESTIBULE                  |  | ESCORTS                        |                     |          |            |
|     | viii  | VESTIBULE SLIDING DOOR         |  | KALSI                          |                     |          |            |
|     |   | BIOTOILET                      |  | JSL, RAIL FAB                  |                     |          |            |
| 10. |   |                                |  |                                |                     |          |            |
|     | 10.1  | Modification / Trail (if any): |  |                                | NIL                 |          |            |
|     | 10.2  | Deviations if any:             |  |                                | NIL                 |          |            |



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|--------------------|---|---------------------------------------|------------------------------------|--------------------|--|--------------------|--|--------------------|----------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   | <b>Railway</b>     | <b>Type</b>                                    | <b>Coach No.</b>   | <b>Dispatch Date</b>                           |                    |                |            |
|                    |   |                                       | 6040                               | ER                 | LWSCN  | 16210              | 01-12-2016                                     |                    |                |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                    |  |                    | <b>NPP Side</b>                                |                    |                |            |
|                    | i.  | <b>Bogie No.</b>                      | 167064                             |                    |  |                    | 167065   |                    |                |            |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-5287                          |                    |  |                    | FM-670   |                    |                |            |
|                    | iii.  | <b>Bolster No.</b>                    | 6409-P                             |                    |  |                    | 6406-P   |                    |                |            |
|                    | iv.   | <b>Axle No.</b>                       | K-6044                             |                    | N-0710   |                    | N-0663   |                    | N-0694         |            |
|                    | v.  | <b>Wheel Dia.</b>                     | 918.00                             | 918.00             | 917.50   | 917.00             | 917.00   | 916.50             | 917.00         | 917.00     |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 08552-6QH4                         | 08548-6QG9         | 08541-6QG9                                     | 08643-6QJ6         | 00125-6132                                     | 00116-6132         | 01790-6QL8     | 00636-6MG6 |
|                    | vii.  | <b>R.B. Nos.</b>                      | 29642                              | 22809              | 35036  | 33495              | 93889  | 93884              | 94742          | 87937      |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |                    | SKF  |                    | SKF  |                    | SKF            |            |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |  |                    |  |                    |                |            |
| 11.2               | <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> |                |            |
|                    |   | <b>Outer</b>                          | <b>Inner</b>                       | <b>Outer</b>       | <b>Inner</b>                                   | <b>Outer</b>       | <b>Inner</b>                                   | <b>Outer</b>       | <b>Inner</b>   |            |
| i.                 | <b>Make &amp; nos.</b>                              | RSK-16-4-023                          | RSK-15-4-074                       | RSK-16-4-293       | RSK-15-4-072                                   | RSK-16-4-336       | RSK-15-4-76                                    | RSK-16-4-304       | RSK-15-4-070   |            |
| ii.                | <b>Ht. at test load</b>                             | 516                                   | 472                                | 516                | 471  | 514                | 470  | 515                | 472            |            |
| iii.               | <b>Align .deviation</b>                             | 3                                     | 6                                  | 6                  | 8  | 7                  | 17   | 8                  | 16             |            |
| 11.3               | <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                  |                                    |                    | RSK-15-5                                       |                    | RSK-14-5                                       |                    | RSK            |            |
|                    | ii.   | Primary inner Spring                  |                                    |                    | RSK-16-3                                       |                    | RSK-16-3                                       |                    | RSK            |            |
|                    | iii.  | Primary Damper                        |                                    |                    | 230,153,715,326                                |                    | 129,197,035                                    |                    | GEREP          |            |
|                    | iv.   | Secondary damper                      |                                    |                    | 027,098  |                    | 168,038  |                    | GEREP          |            |
|                    | v.  | Lateral Damper                        |                                    |                    | 0474   |                    | 0396   |                    | SV             |            |
|                    | vi.   | Yaw Damper                            |                                    |                    |  |                    |  |                    | NIL            |            |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    | L16040/600,L16118/600<br>L16038/600,L16119/600 |                    | L16057/600,L16293/600<br>L16055/600,L16021/600 |                    | FTI            |            |
|                    | viii.   | Brake Disc                            |                                    |                    |  |                    |  |                    | FTI            |            |
|                    | ix.   | Ball joint Control arm                |                                    |                    |  |                    |  |                    | MGN            |            |
|                    | x.  | Lateral Bump stop                     |                                    |                    |  |                    |  |                    | GMT            |            |
|                    | xi.   | Traction center make                  |                                    |                    |  |                    |  |                    | EMSON          |            |
|                    | xii.  | Traction lever make                   |                                    |                    |  |                    |  |                    | AFW,<br>SARITA |            |
|                    | xiii.   | Ball joint traction lever             |                                    |                    |  |                    |  |                    | SGA            |            |
|                    | xiv.  | Traction centre elastic               |                                    |                    |  |                    |  |                    | GMT            |            |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |  |                    |  |                    | TECSPACK       |            |
|                    | xvi.  | Rubber spring                         |                                    |                    |  |                    |  |                    | GMT            |            |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |  |                    |  |                    | SARITA         |            |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |  |                    |  |                    | SARITA         |            |
|                    | xix.  | Fork make                             |                                    |                    |  |                    |  |                    | EMSON          |            |
| 11.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    | NIL  |                    |  |                    |                |            |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    | NIL  |                    |  |                    |                |            |

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|     |   |                                |  |                    |                                |                                  |                   |
|-----|---|--------------------------------|--|--------------------|--------------------------------|----------------------------------|-------------------|
| 1.  | SHELL No.   | 6045                           | DISPATCH DATE  |                    |                                |                                  | <b>27.12.2016</b> |
| 2.  | Railway   | <b>ER</b>                      | Type   | <b>LWSCN1</b>      | Coach No.                      | <b>16214</b>                     |                   |
| 3.  | Booked to   |                                | <b>SSE/C&amp;W/HWH</b>                                   |                    |                                |                                  |                   |
| 4.  | Tare Weight of Coach  |                                | <b>41.239 T</b>  |                    |                                |                                  |                   |
| 5.  | Carrying Capacity   | Seating                        | 80   | <b>Sleeping</b>    | <b>80</b>                      | Luggage <b>NIL</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                              | 1104               | 1104                           |                                  |                   |
|     | v)  | Buffer/CBC (Make )             | <b>ESCORTS</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>86/87</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>                  |                   |
|     | ii  | SEAT & BERTH                   |  |                    |                                | <b>SAVITRY</b>                   |                   |
|     | iii   | BODY SIDE DOORS                |  |                    |                                | <b>NEERA</b>                     |                   |
|     | iv  | WATER TANKS                    |  |                    |                                | <b>AMIT &amp; SHIVALIK,MANOJ</b> |                   |
|     | v   | FLOOR BOARD                    |  |                    |                                | <b>TWPL</b>                      |                   |
|     | vi  | PVC FLOORING                   |  |                    |                                | <b>RESPONSIVE</b>                |                   |
|     | vii   | UIC VESTIBULE                  |  |                    |                                | <b>ESCORTS</b>                   |                   |
|     | viii  | VESTIBULE SLIDING DOOR         |  |                    |                                | <b>KALSI</b>                     |                   |
|     |   | BIOTOILET                      |  |                    |                                | <b>JSL, RAIL FAB</b>             |                   |
| 10. |   |                                |  |                    |                                |                                  |                   |
|     | 10.1  | Modification / Trail (if any): |  |                    |                                | NIL                              |                   |
|     | 10.2  | Deviations if any:             |  |                    |                                | NIL                              |                   |



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|                    |   |                                       |                                    |                    |  |                    |  |                    |               |            |
|--------------------|---|---------------------------------------|------------------------------------|--------------------|--|--------------------|--|--------------------|---------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   | <b>Railway</b>     | <b>Type</b>                                    | <b>Coach No.</b>   | <b>Dispatch Date</b>                           |                    |               |            |
|                    |   |                                       | 6045                               | ER                 | LWSCN  | 16214              | 05-12-2016                                     |                    |               |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                    |  |                    | <b>NPP Side</b>                                |                    |               |            |
|                    | i.  | <b>Bogie No.</b>                      | 167080                             |                    |  |                    | 167081   |                    |               |            |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-5223                          |                    |  |                    | FIAT-5326                                      |                    |               |            |
|                    | iii.  | <b>Bolster No.</b>                    | 6427-GT                            |                    |  |                    | 6314-GT  |                    |               |            |
|                    | iv.   | <b>Axle No.</b>                       | R-3595                             |                    | R-3584   |                    | R-2620   |                    | R-3517        |            |
|                    | v.  | <b>Wheel Dia.</b>                     | 916.50                             | 916.50             | 916.00   | 916.50             | 916.00   | 916.00             | 916.50        | 917.00     |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 00130-6130                         | 00150-6132         | 0005-6130                                      | 00065-6130         | 00047-6138                                     | 00051-6069         | 00110-6044    | 00181-6130 |
|                    | vii.  | <b>R.B. Nos.</b>                      | 62739                              | 98254              | 62740  | 97796              | 96635  | 98427              | 97785         | 98219      |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |                    | SKF  |                    | SKF  |                    | SKF           |            |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |  |                    |  |                    |               |            |
| 11.2               | <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> |               |            |
|                    |   | <b>Outer</b>                          | <b>Inner</b>                       | <b>Outer</b>       | <b>Inner</b>                                   | <b>Outer</b>       | <b>Inner</b>                                   | <b>Outer</b>       | <b>Inner</b>  |            |
| i.                 | <b>Make &amp; nos.</b>                              | RSK-16-4-166                          | RSK-15-9-866                       | RSK-16-4-129       | RSK-15-9-845                                   | RSK-16-4-262       | RSK-15-10-356                                  | RSK-16-4-263       | RSK-15-10-357 |            |
| ii.                | <b>Ht. at test load</b>                             | 516                                   | 469                                | 515                | 472  | 514                | 470  | 512                | 472           |            |
| iii.               | <b>Align .deviation</b>                             | 9                                     | 13                                 | 10                 | 18   | 7                  | 3  | 9                  | 4             |            |
| 11.3               | <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                  |                                    |                    | GBD-16-8                                       |                    | GBD-16-8                                       |                    | GBD           |            |
|                    | ii.   | Primary inner Spring                  |                                    |                    | RSK-16-2                                       |                    | RSK-16-2                                       |                    | RSK           |            |
|                    | iii.  | Primary Damper                        |                                    |                    | 454,689,345,448                                |                    | 482,282,425,463                                |                    | GEREP         |            |
|                    | iv.   | Secondary damper                      |                                    |                    | 197,390  |                    | 360,37   |                    | GEREP         |            |
|                    | v.  | Lateral Damper                        |                                    |                    | 0433   |                    | 0381   |                    | SV            |            |
|                    | vi.   | Yaw Damper                            |                                    |                    |  |                    |  |                    | NIL           |            |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    | L16019/600,K16264/600<br>L16004/600,L16003/600 |                    | L16035/600,L16095/600<br>L16006/600,L16052/600 |                    | FTI           |            |
|                    | viii.   | Brake Disc                            |                                    |                    |  |                    |  |                    | FTI           |            |
|                    | ix.   | Ball joint Control arm                |                                    |                    |  |                    |  |                    | MGN           |            |
|                    | x.  | Lateral Bump stop                     |                                    |                    |  |                    |  |                    | GMT           |            |
|                    | xi.   | Traction center make                  |                                    |                    |  |                    |  |                    | SARITA        |            |
|                    | xii.  | Traction lever make                   |                                    |                    |  |                    |  |                    | SARITA        |            |
|                    | xiii.   | Ball joint traction lever             |                                    |                    |  |                    |  |                    | SGA           |            |
|                    | xiv.  | Traction centre elastic               |                                    |                    |  |                    |  |                    | SGA           |            |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |  |                    |  |                    | TECSPACK      |            |
|                    | xvi.  | Rubber spring                         |                                    |                    |  |                    |  |                    | GMT           |            |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |  |                    |  |                    | SARITA        |            |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |  |                    |  |                    | SARITA        |            |
|                    | xix.  | Fork make                             |                                    |                    |  |                    |  |                    | EMSON         |            |
| 11.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    | NIL  |                    |  |                    |               |            |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    | NIL  |                    |  |                    |               |            |

LWSCN-6045



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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|     |   |                                |  |                    |                                |                             |                   |
|-----|---|--------------------------------|--|--------------------|--------------------------------|-----------------------------|-------------------|
| 1.  | SHELL No.   | 6042                           | DISPATCH DATE  |                    |                                |                             | <b>22.12.2016</b> |
| 2.  | Railway   | <b>ER</b>                      | Type   | <b>LWSCN1</b>      | Coach No.                      | <b>16213</b>                |                   |
| 3.  | Booked to   |                                | <b>SSE/C&amp;W/HWH</b>                                   |                    |                                |                             |                   |
| 4.  | Tare Weight of Coach  |                                | <b>41.239 T</b>  |                    |                                |                             |                   |
| 5.  | Carrying Capacity   | Seating                        | 80   | <b>Sleeping</b>    | <b>80</b>                      | Luggage <b>NIL</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                              | 1102               | 1102                           |                             |                   |
|     | v)  | Buffer/CBC (Make )             | <b>ESCORTS</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>86/87</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>             |                   |
|     | ii  | SEAT & BERTH                   |  |                    |                                | <b>SAVITRY</b>              |                   |
|     | iii   | BODY SIDE DOORS                |  |                    |                                | <b>SUKATA</b>               |                   |
|     | iv  | WATER TANKS                    |  |                    |                                | <b>AMIT &amp; SHIVALIK,</b> |                   |
|     | v   | FLOOR BOARD                    |  |                    |                                | <b>TWPL</b>                 |                   |
|     | vi  | PVC FLOORING                   |  |                    |                                | <b>RESPONSIVE</b>           |                   |
|     | vii   | UIC VESTIBULE                  |  |                    |                                | <b>ESCORTS</b>              |                   |
|     | viii  | VESTIBULE SLIDING DOOR         |  |                    |                                | <b>KALSI</b>                |                   |
|     |   | BIOTOILET                      |  |                    |                                | <b>JSL, RAIL FAB</b>        |                   |
| 10. |   |                                |  |                    |                                |                             |                   |
|     | 10.1  | Modification / Trail (if any): |  |                    |                                | NIL                         |                   |
|     | 10.2  | Deviations if any:             |  |                    |                                | NIL                         |                   |



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|--------------------|---|---------------------------------------|------------------------------------|--------------------|--|--------------------|--------------|--|------------------|------------|----------------------|--|
| 11.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |                    | <b>Railway</b>                                 |                    | <b>Type</b>  |  | <b>Coach No.</b> |            | <b>Dispatch Date</b> |  |
|                    |   |                                       | 6042                               |                    | ER   |                    | LWSCN        |  | 16213            |            | 02-12-2016           |  |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                    |  |                    |              |  | <b>NPP Side</b>  |            |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 167078                             |                    |  |                    |              |  | 167079           |            |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-5331                          |                    |  |                    |              |  | FIAT-5330        |            |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 6433-GT                            |                    |  |                    |              |  | 6316-P           |            |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | N-5669                             |                    |  | N-0519             |              |  | N-0331           |            | N-0580               |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 917.00                             | 917.50             | 916.00   | 916.00             | 917.50       | 917.00   | 917.00           | 917.00     | 917.00               |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 00044-07200                        | 00014-07198        | 00673-6MG6                                     | 07065-6QJ4         | 00160-6108   | 00003-6109                                     | 00115-6110       | 00008-6014 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 04012                              | 93596              | 88696  | 62899              | 93353        | 93267  | 99732            | 80665      |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |                    |  | SKF                |              |  | SKF              |            | SKF                  |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |  |                    |              |  |                  |            |                      |  |
| 11.2               | <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>                             |                  |            |                      |  |
|                    |   | <b>Outer</b>                          | <b>Inner</b>                       | <b>Outer</b>       | <b>Inner</b>                                   | <b>Outer</b>       | <b>Inner</b> | <b>Outer</b>                                   | <b>Inner</b>     |            |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | RSK-16-4-367                          | FSK-16-7-47                        | RSK-16-4-132       | FSK-16-7-37                                    | RSK-16-4-238       | FSK-16-7-49  | RSK-16-4-111                                   | FSK-16-7-93      |            |                      |  |
| ii.                | <b>Ht. at test load</b>                             | 511                                   | 468                                | 513                | 467.50   | 513                | 468          | 513  | 468              |            |                      |  |
| iii.               | <b>Align .deviation</b>                             | 6                                     | 7                                  | 8                  | 10   | 3                  | 8            | 5  | 8                |            |                      |  |
| 11.3               | <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                  |                                    |                    | RSK-15-6                                       |                    |              | RSK-15-6                                       |                  |            | RSK                  |  |
|                    | ii.   | Primary inner Spring                  |                                    |                    | RSK-16-2                                       |                    |              | RSK-16-2                                       |                  |            | RSK                  |  |
|                    | iii.  | Primary Damper                        |                                    |                    | 353,652,509,538                                |                    |              | 268,95,324,130                                 |                  |            | GEREP                |  |
|                    | iv.   | Secondary damper                      |                                    |                    | 362,100  |                    |              | 14,50  |                  |            | GEREP                |  |
|                    | v.  | Lateral Damper                        |                                    |                    | 0346   |                    |              | 0405   |                  |            | SV                   |  |
|                    | vi.   | Yaw Damper                            |                                    |                    |  |                    |              |  |                  |            | NIL                  |  |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    | G16270/600,G16221/600<br>G16266/600,G16220/600 |                    |              | G16265/600,G16223/600<br>G16268/600,G16222/600 |                  |            | FTI                  |  |
|                    | viii.   | Brake Disc                            |                                    |                    |  |                    |              |  |                  |            | KBI                  |  |
|                    | ix.   | Ball joint Control arm                |                                    |                    |  |                    |              |  |                  |            | MGN                  |  |
|                    | x.  | Lateral Bump stop                     |                                    |                    |  |                    |              |  |                  |            | GMT                  |  |
|                    | xi.   | Traction center make                  |                                    |                    |  |                    |              |  |                  |            | SARITA               |  |
|                    | xii.  | Traction lever make                   |                                    |                    |  |                    |              |  |                  |            | SARITA               |  |
|                    | xiii.   | Ball joint traction lever             |                                    |                    |  |                    |              |  |                  |            | SGA                  |  |
|                    | xiv.  | Traction centre elastic               |                                    |                    |  |                    |              |  |                  |            | SGA                  |  |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |  |                    |              |  |                  |            | TECSPACK             |  |
|                    | xvi.  | Rubber spring                         |                                    |                    |  |                    |              |  |                  |            | GMT                  |  |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |  |                    |              |  |                  |            | SARITA               |  |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |  |                    |              |  |                  |            | SARITA               |  |
|                    | xix.  | Fork make                             |                                    |                    |  |                    |              |  |                  |            | SARITA               |  |
| 11.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    |  |                    |              | NIL  |                  |            |                      |  |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    |  |                    |              | NIL  |                  |            |                      |  |

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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|     |   |                                |  |                                |                     |                  |            |
|-----|---|--------------------------------|--|--------------------------------|---------------------|------------------|------------|
| 1.  | SHELL No.   | 6041                           | DISPATCH DATE  |                                |                     |                  | 26.12.2016 |
| 2.  | Railway   | ER                             | Type   | LWSCN1                         | Coach No.           | 16212            |            |
| 3.  | Booked to   |                                | SSE/C&W/HWH  |                                |                     |                  |            |
| 4.  | Tare Weight of Coach  |                                | 41.239 T   |                                |                     |                  |            |
| 5.  | Carrying Capacity   | Seating                        | 80   | Sleeping                       | 80                  | Luggage          | NIL        |
| 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                           | 1100                |                  |            |
|     | v)  | Buffer/CBC (Make )             | FAVELLY  | 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                        | 87/88               |                  |            |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |                                |                     |                  |            |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |                                |                     |                  |            |
| 9.  | Traceability of Furnishing Items:                                   |                                |  |                                |                     | Make             |            |
|     | i   | BRAKE EQUIPMENT                |  |                                |                     | FAIVELEY         |            |
|     | ii  | SEAT & BERTH                   |  |                                |                     | SAVITRY          |            |
|     | iii   | BODY SIDE DOORS                |  |                                |                     | SUKATA           |            |
|     | iv  | WATER TANKS                    |  |                                |                     | AMIT & SHIVALIK, |            |
|     | v   | FLOOR BOARD                    |  |                                |                     | TWPL             |            |
|     | vi  | PVC FLOORING                   |  |                                |                     | RESPONSIVE       |            |
|     | vii   | UIC VESTIBULE                  |  |                                |                     | ESCORTS          |            |
|     | viii  | VESTIBULE SLIDING DOOR         |  |                                |                     | KALSI            |            |
|     |   | BIOTOILET                      |  |                                |                     | JSL, RAIL FAB    |            |
| 10. |   |                                |  |                                |                     |                  |            |
|     | 10.1  | Modification / Trail (if any): |  |                                |                     | NIL              |            |
|     | 10.2  | Deviations if any:             |  |                                |                     | NIL              |            |



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|                    |   |                                |                                    |              |  |              |  |              |              |            |
|--------------------|---|--------------------------------|------------------------------------|--------------|--|--------------|--|--------------|--------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                | Shell No.                          | Railway      | Type   | Coach No.    | Dispatch Date                                  |              |              |            |
|                    |   |                                | 6041                               | ER           | LWSCN  | 16212        | 29-11-2016                                     |              |              |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                | PP Side                            |              |  |              | NPP Side                                       |              |              |            |
|                    | i.  | Bogie No.                      | 167062                             |              |  |              | 167063   |              |              |            |
|                    | ii.   | Frame No.                      | FIAT-5319                          |              |  |              | FIAT-5334                                      |              |              |            |
|                    | iii.  | Bolster No.                    | 6353-P                             |              |  |              | 6411-P   |              |              |            |
|                    | iv.   | Axle No.                       | R-2336                             |              | K-3819   |              | K-2970   |              | N-0898       |            |
|                    | v.  | Wheel Dia.                     | 916.00                             | 916.00       | 916.00   | 916.00       | 916.00   | 916.50       | 917.00       | 917.00     |
|                    | vi.   | Wheel Disc No.                 | 00010-7301                         | 00060-7301   | 06597-6QM1                                     | 00676-6MG6   | 00102-6132                                     | 00162-6107   | 00096-7196   | 00161-6076 |
|                    | vii.  | R.B. Nos.                      | 05904                              | 05576        | 05824  | 06059        | 99724  | 80424        | 93508        | 93529      |
|                    | viii.   | R.B. Make                      | TIMKEN                             |              | TIMKEN   |              | SKF  |              | SKF          |            |
|                    | ix.   | RB Type                        | UIC CARTRIDGE TAPER ROLLER BEARING |              |  |              |  |              |              |            |
| 11.2               | <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.                 | Make & nos.   | RSK-16-4-323                   | RSK-16-4-600                       | RSK-16-4-371 | RSK-16-4-634                                   | RSK-16-4-282 | RSK-16-4-836                                   | RSK-16-4-327 | RSK-16-4-612 |            |
| ii.                | Ht. at test load                                    | 516                            | 471                                | 516          | 472  | 516          | 468  | 517          | 472          |            |
| iii.               | Align .deviation                                    | 8                              | 5                                  | 10           | 5  | 8            | 15   | 7            | 15           |            |
| 11.3               | <b>Items traceability:</b>                          |                                |                                    |              |  |              |  |              |              |            |
|                    | Sno.  | Item                           |                                    |              | PP Side Bogie                                  |              | NPP side Bogie                                 |              | Make         |            |
|                    | i.  | Primary Outer Spring           |                                    |              | RSK-15-6                                       |              | RSK-15-6                                       |              | RSK          |            |
|                    | ii.   | Primary inner Spring           |                                    |              | RSK-16-2                                       |              | RSK-16-2                                       |              | RSK          |            |
|                    | iii.  | Primary Damper                 |                                    |              | 567,138,135,67                                 |              | 131,124,22,18                                  |              | GEREP        |            |
|                    | iv.   | Secondary damper               |                                    |              | 405,82   |              | 361,319  |              | GEREP        |            |
|                    | v.  | Lateral Damper                 |                                    |              | 373  |              | 402  |              | SV           |            |
|                    | vi.   | Yaw Damper                     |                                    |              |  |              |  |              | NIL          |            |
|                    | vii.  | Brake cylinder & Caliper       |                                    |              | K16052/600,K16064/600<br>K16053/600,K16068/600 |              | K16039/600,K16077/600<br>K16039/600,K16079/600 |              | FTI          |            |
|                    | viii.   | Brake Disc                     |                                    |              |  |              |  |              | KBI,FTI      |            |
|                    | ix.   | Ball joint Control arm         |                                    |              |  |              |  |              | MGN          |            |
|                    | x.  | Lateral Bump stop              |                                    |              |  |              |  |              | GMT          |            |
|                    | xi.   | Traction center make           |                                    |              |  |              |  |              | SARITA       |            |
|                    | xii.  | Traction lever make            |                                    |              |  |              |  |              | AWF          |            |
|                    | xiii.   | Ball joint traction lever      |                                    |              |  |              |  |              | SGA          |            |
|                    | xiv.  | Traction centre elastic        |                                    |              |  |              |  |              | SGA          |            |
|                    | xv.   | Secondary rubber pad           |                                    |              |  |              |  |              | TECSPACK     |            |
|                    | xvi.  | Rubber spring                  |                                    |              |  |              |  |              | GMT          |            |
|                    | xvii.   | Anti roll bar make             |                                    |              |  |              |  |              | SARITA       |            |
|                    | xviii.  | Ball joint roll link           |                                    |              |  |              |  |              | SARITA       |            |
|                    | xix.  | Fork make                      |                                    |              |  |              |  |              | EMSON        |            |
| 11.4               | i.  | Modification / Trial (if any): |                                    |              |  |              | NIL  |              |              |            |
|                    | ii.   | Deviations (if any):           |                                    |              |  |              | NIL  |              |              |            |

LWSCN-6041



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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|     |   |                                |  |                                |                     |         |            |
|-----|---|--------------------------------|--|--------------------------------|---------------------|---------|------------|
| 1.  | SHELL No.   | 6046                           | DISPATCH DATE  |                                |                     |         | 28.12.2016 |
| 2.  | Railway   | ER                             | Type   | LWSCN1                         | Coach No.           | 16216   |            |
| 3.  | Booked to   |                                | SSE/C&W/HWH  |                                |                     |         |            |
| 4.  | Tare Weight of Coach  |                                | 41.239 T   |                                |                     |         |            |
| 5.  | Carrying Capacity   | Seating                        | 80   | Sleeping                       | 80                  | Luggage | NIL        |
| 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 )             | ESCORTS  | 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                        | 88/86               |         |            |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |                                |                     |         |            |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |                                |                     |         |            |
| 9.  | Traceability of Furnishing Items:                                   |                                |  | Make                           |                     |         |            |
|     | i   | BRAKE EQUIPMENT                | FAIVELEY   |                                |                     |         |            |
|     | ii  | SEAT & BERTH                   | SAVITRY  |                                |                     |         |            |
|     | iii   | BODY SIDE DOORS                | JBM  |                                |                     |         |            |
|     | iv  | WATER TANKS                    | AMIT & SHIVALIK,MANOJ                                    |                                |                     |         |            |
|     | v   | FLOOR BOARD                    | TWPL   |                                |                     |         |            |
|     | vi  | PVC FLOORING                   | RESPONSIVE   |                                |                     |         |            |
|     | vii   | UIC VESTIBULE                  | ESCORTS  |                                |                     |         |            |
|     | viii  | VESTIBULE SLIDING DOOR         | KALSI  |                                |                     |         |            |
|     |   | BIOTOILET                      | JSL, RAIL FAB  |                                |                     |         |            |
| 10. |   |                                |  |                                |                     |         |            |
|     | 10.1  | Modification / Trail (if any): |  |                                |                     | NIL     |            |
|     | 10.2  | Deviations if any:             |  |                                |                     | NIL     |            |



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|--------------------|---|--------------------------------|------------------------------------|--|-------------|--|---------------|--------------|--------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                | Shell No.                          | Railway  | Type        | Coach No.                                      | Dispatch Date |              |              |            |
|                    |   |                                | 6046                               | ER   | LWSCN       | 16216  | 12-12-2016    |              |              |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                | PP Side                            |  |             |  | NPP Side      |              |              |            |
|                    | i.  | Bogie No.                      | 167092                             |  |             |  | 167093        |              |              |            |
|                    | ii.   | Frame No.                      | FIAT-5081                          |  |             |  | FIAT-5269     |              |              |            |
|                    | iii.  | Bolster No.                    | 6357-P                             |  |             |  | 6449-GT       |              |              |            |
|                    | iv.   | Axle No.                       | R-3209                             |  | K-3456      |  | N-0325        |              | N-6379       |            |
|                    | v.  | Wheel Dia.                     | 915.50                             | 916.00   | 916.00      | 916.00   | 917.00        | 917.00       | 917.00       | 917.00     |
|                    | vi.   | Wheel Disc No.                 | 00014-6104                         | 00174-6067                                     | 00066-6018  | 00047-6018                                     | 00014-6018    | 00118-6178   | 00146-6106   | 00039-6178 |
|                    | vii.  | R.B. Nos.                      | 62513                              | 93355  | 88208       | 97923  | 64750         | 94744        | 60189        | 94759      |
|                    | viii.   | R.B. Make                      | SKF                                |  | SKF         |  | SKF           |              | SKF          |            |
|                    | ix.   | RB Type                        | UIC CARTRIDGE TAPER ROLLER BEARING |  |             |  |               |              |              |            |
| 11.2               | <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.                 | Make & nos.   | RSK-16-4-254                   | FSK-16-7-26                        | RSK-16-4-027                                   | FSK-16-7-31 | RSK-16-4-075                                   | RSK-15-4-299  | RSK-16-4-253 | RSK-15-4-856 |            |
| ii.                | Ht. at test load                                    | 512                            | 470                                | 513  | 471.50      | 515  | 468           | 514          | 470          |            |
| iii.               | Align .deviation                                    | 2                              | 7                                  | 5  | 10          | 5  | 23            | 8            | 27           |            |
| 11.3               | <b>Items traceability:</b>                          |                                |                                    |  |             |  |               |              |              |            |
|                    | Sno.  | Item                           |                                    | PP Side Bogie                                  |             | NPP side Bogie                                 |               | Make         |              |            |
|                    | i.  | Primary Outer Spring           |                                    | FSK-16-7                                       |             | FSK-16-7                                       |               | FSK          |              |            |
|                    | ii.   | Primary inner Spring           |                                    | RSK-16-2                                       |             | RSK-16-2                                       |               | RSK          |              |            |
|                    | iii.  | Primary Damper                 |                                    | 21,315,120,13                                  |             | 123,147,150,100                                |               | GEREP        |              |            |
|                    | iv.   | Secondary damper               |                                    | 381,80   |             | 217,69   |               | GEREP        |              |            |
|                    | v.  | Lateral Damper                 |                                    | 0526   |             | 0518   |               | SV           |              |            |
|                    | vi.   | Yaw Damper                     |                                    |  |             |  |               | NIL          |              |            |
|                    | vii.  | Brake cylinder & Caliper       |                                    | L16037/600,L16120/600<br>L16041/600,L16121/600 |             | L16066/600,K16301/600<br>L16071/600,K16247/600 |               | FTI          |              |            |
|                    | viii.   | Brake Disc                     |                                    |  |             |  |               | KBI          |              |            |
|                    | ix.   | Ball joint Control arm         |                                    |  |             |  |               | MGN          |              |            |
|                    | x.  | Lateral Bump stop              |                                    |  |             |  |               | GMT          |              |            |
|                    | xi.   | Traction center make           |                                    |  |             |  |               | SARITA       |              |            |
|                    | xii.  | Traction lever make            |                                    |  |             |  |               | SARITA       |              |            |
|                    | xiii.   | Ball joint traction lever      |                                    |  |             |  |               | SGA          |              |            |
|                    | xiv.  | Traction centre elastic        |                                    |  |             |  |               | SGA          |              |            |
|                    | xv.   | Secondary rubber pad           |                                    |  |             |  |               | TECSPACK     |              |            |
|                    | xvi.  | Rubber spring                  |                                    |  |             |  |               | GMT          |              |            |
|                    | xvii.   | Anti roll bar make             |                                    |  |             |  |               | SARITA       |              |            |
|                    | xviii.  | Ball joint roll link           |                                    |  |             |  |               | SARITA       |              |            |
|                    | xix.  | Fork make                      |                                    |  |             |  |               | EMSON        |              |            |
| 11.4               | 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.   | 6043                           | DISPATCH DATE  |                                |                     |                  | 27.12.2016 |
| 2.  | Railway   | ER                             | Type   | LWSCN1                         | Coach No.           | 16209            |            |
| 3.  | Booked to   |                                | SSE/C&W/HWH  |                                |                     |                  |            |
| 4.  | Tare Weight of Coach  |                                | 41.239 T   |                                |                     |                  |            |
| 5.  | Carrying Capacity   | Seating                        | 80   | Sleeping                       | 80                  | Luggage          | NIL        |
| 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                              | 1102                           | 1105                |                  |            |
|     | v)  | Buffer/CBC (Make )             | ESCORTS  | 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                        | 87/89               |                  |            |
|     | 8.2   | APPLICATION OF PCN-123         | SATISFACTORY   |                                |                     |                  |            |
|     | 8.3   | INSUALTION                     | SATISFACTORY   |                                |                     |                  |            |
| 9.  | Traceability of Furnishing Items:                                   |                                |  |                                |                     | Make             |            |
|     | i   | BRAKE EQUIPMENT                |  |                                |                     | FAIVELEY         |            |
|     | ii  | SEAT & BERTH                   |  |                                |                     | SAVITRY          |            |
|     | iii   | BODY SIDE DOORS                |  |                                |                     | SUKATA           |            |
|     | iv  | WATER TANKS                    |  |                                |                     | AMIT & SHIVALIK, |            |
|     | v   | FLOOR BOARD                    |  |                                |                     | TWPL             |            |
|     | vi  | PVC FLOORING                   |  |                                |                     | RESPONSIVE       |            |
|     | vii   | UIC VESTIBULE                  |  |                                |                     | ESCORTS          |            |
|     | viii  | VESTIBULE SLIDING DOOR         |  |                                |                     | KALSI            |            |
|     |   | BIOTOILET                      |  |                                |                     | JSL, RAIL FAB    |            |
| 10. |   |                                |  |                                |                     |                  |            |
|     | 10.1  | Modification / Trail (if any): |  |                                | NIL                 |                  |            |
|     | 10.2  | Deviations if any:             |  |                                | NIL                 |                  |            |



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|--------------------|---|--------------------------------|------------------------------------|--------------|--|--------------|--|--------------|------------------|------------|
| 11.                | <b>Bogie Details:</b>                               |                                | Shell No.                          | Railway      | Type   | Coach No.    | Dispatch Date                                  |              |                  |            |
|                    |   |                                | 6043                               | ER           | LWSCN  | 16209        | 05-12-2016                                     |              |                  |            |
| 11.1               | <b>Wheel &amp; Axle Details:</b>                    |                                | PP Side                            |              |  |              | NPP Side                                       |              |                  |            |
|                    | i.  | Bogie No.                      | 167082                             |              |  |              | 167083   |              |                  |            |
|                    | ii.   | Frame No.                      | FIAT-5105                          |              |  |              | FIAT-5344                                      |              |                  |            |
|                    | iii.  | Bolster No.                    | 6415-GT                            |              |  |              | 6428-GT  |              |                  |            |
|                    | iv.   | Axle No.                       | N-6501                             |              | R-3338   |              | N-5767   |              | N-6783           |            |
|                    | v.  | Wheel Dia.                     | 917.00                             | 917.00       | 917.00   | 917.00       | 917.00   | 917.00       | 917.00           | 917.00     |
|                    | vi.   | Wheel Disc No.                 | 08393-6QH4                         | 08403-6QH4   | 00131-6133                                     | 00096-6178   | 00028-6107                                     | 00127-6130   | 03708-6QK3       | 03675-6QK3 |
|                    | vii.  | R.B. Nos.                      | 94284                              | 93725        | 79963  | 98419        | 80608  | 80604        | 80595            | 94778      |
|                    | viii.   | R.B. Make                      | SKF                                |              | SKF  |              | SKF  |              | SKF              |            |
|                    | ix.   | RB Type                        | UIC CARTRIDGE TAPER ROLLER BEARING |              |  |              |  |              |                  |            |
| 11.2               | <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.                 | Make & nos.   | RSK-16-4-252                   | FSK-16-7-22                        | RSK-16-4-251 | FSK-16-7-027                                   | RSK-16-4-261 | FSK-16-7-10                                    | RSK-16-4-247 | FSK-16-7-40      |            |
| ii.                | Ht. at test load                                    | 515                            | 469.50                             | 515          | 470.50   | 516          | 471  | 516          | 471.50           |            |
| iii.               | Align .deviation                                    | 7                              | 7                                  | 10           | 8  | 6            | 9  | 7            | 10               |            |
| 11.3               | <b>Items traceability:</b>                          |                                |                                    |              |  |              |  |              |                  |            |
|                    | Sno.  | Item                           |                                    |              | PP Side Bogie                                  |              | NPP side Bogie                                 |              | Make             |            |
|                    | i.  | Primary Outer Spring           |                                    |              | GBD-16-8                                       |              | GBD-16-8                                       |              | GBD              |            |
|                    | ii.   | Primary inner Spring           |                                    |              | RSK-16-2                                       |              | RSK-16-2                                       |              | RSK              |            |
|                    | iii.  | Primary Damper                 |                                    |              | 155,40,25,04                                   |              | 162,32,39,300                                  |              | GEREP            |            |
|                    | iv.   | Secondary damper               |                                    |              | 374,71   |              | 079,33   |              | GEREP            |            |
|                    | v.  | Lateral Damper                 |                                    |              | 502  |              | 408  |              | SV               |            |
|                    | vi.   | Yaw Damper                     |                                    |              |  |              |  |              | NIL              |            |
|                    | vii.  | Brake cylinder & Caliper       |                                    |              | L16024/600,L16046/600<br>L16026/600,L16043/600 |              | L16034/600,L16097/600<br>L16018/600,L16098/600 |              | FTI              |            |
|                    | viii.   | Brake Disc                     |                                    |              |  |              |  |              | FTI              |            |
|                    | ix.   | Ball joint Control arm         |                                    |              |  |              |  |              | MGN              |            |
|                    | x.  | Lateral Bump stop              |                                    |              |  |              |  |              | MGN,GMT          |            |
|                    | xi.   | Traction center make           |                                    |              |  |              |  |              | EMSON            |            |
|                    | xii.  | Traction lever make            |                                    |              |  |              |  |              | SARITA           |            |
|                    | xiii.   | Ball joint traction lever      |                                    |              |  |              |  |              | SGA              |            |
|                    | xiv.  | Traction centre elastic        |                                    |              |  |              |  |              | GMT,SGA          |            |
|                    | xv.   | Secondary rubber pad           |                                    |              |  |              |  |              | TECSPACK         |            |
|                    | xvi.  | Rubber spring                  |                                    |              |  |              |  |              | GMT              |            |
|                    | xvii.   | Anti roll bar make             |                                    |              |  |              |  |              | SARITA,<br>EMSON |            |
|                    | xviii.  | Ball joint roll link           |                                    |              |  |              |  |              | SARITA           |            |
|                    | xix.  | Fork make                      |                                    |              |  |              |  |              | EMSON            |            |
| 11.4               | i.  | Modification / Trial (if any): |                                    |              | NIL  |              |  |              |                  |            |
|                    | ii.   | Deviations (if any):           |                                    |              | NIL  |              |  |              |                  |            |

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