E.10/1 : LAYING OF RAILS

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1. SCOPE

1.1 This specification covers the work necessary for the laying of rails on new lines and the replacing of rails on existing lines.

2. INTERPRETATIONS

2.1 SUPPORTING SPECIFICATIONS

2.1.1 Where this specification is required for a project, the following specifications, shall, inter alia, form part of the contract documents:

a) The E.10 Gen - General
b) The E.10/2 - Laying of sleepers
c) The E.10/11 - Survey and setting out of track alignment and referencing

2.1.2 In addition the following specifications, inter alia, may be required:

a) The E.10/4 - Ballasting and tamping
b) The E.10/5 - Destressing of rails
c) The E.10/7 - Field welding of rail joints
d) The E.10/8 - Field welding and corrective grinding of battered rail joints, skid marks and rail crown damage
e) The E.10/9 - Slewing and alignment
f) The E.10/12 - Installation of insulated rail joints

2.2 DEFINITIONS

Void.

3. MATERIALS

3.1 SUPPLY OF MATERIAL

3.1.1 All rails, whether new, second-hand or reconditioned and reprofiled, shall be of the size, class and type specified in the Project Specification.

3.1.2 Rails, junction rails, spliced joints, rails for closures, check rails and reinforcing rails may be supplied overlength and/or undrilled.

4. PLANT

Void.

5. CONSTRUCTION

5.1 GENERAL

Void.

5.2 SAFETY

Void.

5.3 PROGRAMME AND METHOD STATEMENT

Void.

5.4 METHODS AND PROCEDURES

5.4.1 TRANSPORT AND HANDLING OF MATERIAL.

5.4.1.1 When reconditioned/reprofiled long-welded rails are supplied, the Contractor shall examine the rails before offloading them, select pairs of rails and offload them in pairs in accordance with their colour coding so that they will not need to be transposed or turned to comply with 5.4.3.11 hereof.

5.4.1.2 The Contractor shall ensure that when rails are offloaded, they are left lying crown up and not in contact with running rails, traction masts, signals or track bonds. They shall be offloaded clear of level crossings and subsequently moved into position.

5.4.1.3 The Contractor shall ensure that when long-welded rails are offloaded, gaps are left at the positions where spliced and insulating joints are shown on the drawing. The gaps shall be 9 m long for spliced joints and 5 m long for insulating joints.

5.4.1.4 When offloading rails the Contractor shall, after he has satisfied himself that the anchorage is correct and that the rails will fall as he wants them to, advise the Engineer that the train may be moved. After offloading is complete, the Contractor shall secure the chutes, clamps, chains and end shields on the material train.

5.4.1.5 The handling of Cr Mn rails require special treatment and the Contractor shall ensure that he adheres to the method specified in the Project Specification.

5.4.1.6 Released rails shall, as directed by the Engineer, be either sawn or flame-cut where lying, into lengths in accordance with Annexure I of specification E.10 Gen. The cuts shall be made neatly and at right angles to both longitudinal axes of the rail.

Released rails must be cut in lengths of 36 m, 108 m or 216 m as far as possible. Only when it is totally impossible to cut rails in these lengths, will other lenghts be acceptable.

Scrap rails may be cut into shorter lengths.

5.4.1.7 Released or surplus rails longer than 12,5 m shall be loaded onto bolster wagons or drop-sided wagons on a material train. Rails of 12,5 m or shorter shall be either loaded into drop-sided wagons on a material train or disposed of as the Engineer directs.

5.4.2 STRAIGHTENING AND CURVING OF RAILS

5.4.2.1 Because of the danger of fracture, rails shall not be straightened or curved when the rail temperature is less than 5°C except for Cr Mn rails for which the temperature will be specified in the Project Specification.

5.4.2.2 After second-hand rails have been distributed and before they are placed in straight track, the Contractor shall inspect each and every rail over its whole length and mark the sections of rails to be straightened. After the Engineer has agreed about the sections to be straightened, the Contractor shall straighten all kinks and bends so that a 0,4 mm feeler gauge will not pass between a 1 000 mm straight edge and the running edge of the rail.

5.4.2.3 All the rails to be laid in curved track between the mid-points of the transition curves, or in the absence of transition curves, between the beginnings and the ends of the circular curves, either as running rails or check rails, shall be curved to true radius before insertion into the track. All such rails shall be curved throughout their length, except that in the case of rails of 36 m and longer, to be laid in curves of 500 m radius and over, only 10 m at each end shall be curved to true radius.

5.4.2.4 Rails shall be uniformly curved. When a jim-crow is used, it shall be moved by approximately half its length at a time from one end of the portion to be curved to the other. The correct size jim-crow shall be used for the mass of rail concerned.

5.4.2.5 Where a mechanical jim-crow is used, the end metre length of the rail shall be curved with a hand type jim-crow. A mechanical jim-crow shall not be used on rails with side wear or burring.

5.4.2.6 During bending of rails to radius or to remove kinks, rails shall be so supported that they are free to move to assume the new shape.

5.4.3 LAYING OF RAILS

5.4.3.1 The rail temperature shall be measured by placing the track thermometer on the crown of the rail and shading it from direct sunlight. The track thermometer must remain in contact with the rail for at least ten minutes before it is read. When laying long welded rails in running lines, the Contractor shall have at least three track thermometers in continuous use. Near cuttings or where direct sunlight is obscured, temperature readings shall be taken in sufficient locations along the rails to ensure that the readings are representative.

5.4.3.2 The Contractor shall measure the rail temperature and shall lay the rails with the correct expansion gaps for the particular rail length and temperature as shown in Annexure D of specification E.10 Gen. The gaps shall be set by means of shims and the sleeper fastenings shall be fitted immediately after the rail is in its proper position. Shims must be removed before the trains are permitted to pass.

5.4.3.3 When 36 m rails are laid outside the temperature ranges shown in Annexure D of specification E.10 Gen., the expansion gaps shall be adjusted within these temperature ranges as soon as possible.

5.4.3.4 Rails on straight track shall be laid with square joints. On curved track, stagger shall not exceed 60 mm.

5.4.3.5 Holes required in rails shall be drilled in accordance with the drawings and all burrs shall be removed.

5.4.3.6 When fishbolt holes are drilled incorrectly, the rail shall be cut and a new hole or holes drilled at the Contractor's own cost.

5.4.3.7 Junction rails shall be used for joining rails of different profiles. Junction fishplates may be used only when the use of junction rails is not possible.

5.4.3.8 The Contractor shall build fishplated joints with the nuts on the gauge side of the rail.

5.4.3.9 The Contractor shall position rail joints near turnouts, bridges and level crossings where directed by the Engineer.

5.4.3.10 No rail shorter than 4,2 m may be left permanently in the track unless one or both ends are welded to the adjoining rail.

5.4.3.11 The Contractor shall select and sort second-hand rails in accordance with their colour coding and lay them with the better running edges on the gauge side and, if the rails are marked to indicate the order or position in which they are to be laid, lay them accordingly.

5.4.3.12 When any track is to be laid or rerailed with second-hand rails which have not been reconditioned, the Contractor shall select the rails and lay them to minimize the height difference after the fishplates have been applied and the fishbolts tightened. In running lines, the rail ends at such joints shall be corrected as specified in specifications E.10 Gen. and E.10/8.

5.4.3.13 The Contractor shall not flame cut Cr Mn rails which are to be joined by welding; cuts shall be made with an approved abrasive disc cutter. The Contractor may flame cut other types of rails which are to be joined by exothermic welding, if such welding will be done before any train is allowed to pass. All other cuts necessary shall be made with a saw or disc cutter. Cuts shall be square, straight and perpendicular to the long axes of the rail, and all burrs and rough edges shall be removed.

5.4.3.14 When temporary closure rails laid in the gaps intended for splice or insulating joints are removed, the Contractor shall build and insert the joints after cutting the joint and/or running rails where necessary. Where long-welded rails have been laid without such temporary closure rails, the Contractor shall cut out the requisite length of rail and build and insert the joints. In all cases, the cuts shall be made so that the welds at the ends of the joints fall between two sleepers. The joints or rails shall be cut so that welds are about 9 m apart for spliced joints, and about 5 m apart for insulating joints.

5.4.4 CHECK RAILS

5.4.4.1 New check rails on curves shall be laid as soon as possible after each high leg has been laid.

5.4.4.2 When second-hand rails are supplied for use as check rails, the Contractor shall select and lay the better edge facing the running edge of the rail on the inside of the curve.

5.4.4.3 The Contractor shall lay check rails where directed by the Engineer. The flangeway between the check rail and the running rail shall be 63 mm when new rails are laid.

5.4.4.4 Check rails shall be curved according to clause 5.4.2.3 hereof.

5.4.4.5 Joints in check rails shall be located midway between two sleepers and shall be at least 3 m from a joint in the running rail in the low leg, unless there is an insulating joint in the low leg, in which event a gap 25 mm wide shall be left in the check rail opposite the joint in the running rail. The wearing edge of the check rail must be chamfered 5 mm over a length of 50 mm on both sides of the gap.

5.4.4.6 The extreme ends of check rails shall be bent as directed by the Engineer.

5.4.4.7 Foot guards shall be inserted at the splayed ends of check rails at stations and sidings where so specified in the Project Specification.

5.4.5 ADDITIONAL REQUIREMENTS FOR LONG WELDED RAILS

5.4.5.1 If a track is built in skeleton form on sleepers laid on the formation without ballast, long welded rails may be laid at any temperature.

5.4.5.2 On open lines long-welded rails shall be finally fastened down within rail temperature range A for running lines and range D for yard tracks in accordance with Annexure H of specification E.10 Gen.

5.4.5.3 To ensure that there is no differential stress between the two rails of a track, the Contractor shall, when finally fastening down the rails within the destressing temperature range, fit the sleeper fastenings of the left and right rails simultaneously on each sleeper.

5.4.5.4 The Engineer will instruct where and what type of splice joints are to be installed or to be removed. If splice joints are not installed at the same time as the long welded rails are laid, the gaps intended for the splice joints shall be closed with temporary closure rails. Splice joints shall be welded to the long welded rails only after the rails have been destressed.

5.4.5.5 Where there are long-welded rails at one end only of a spliced joint, the joint shall be laid with the splice rails (movable end) adjacent to and welded to the long-welded rails.

5.4.5.6 Splice joints shall be built with the gap at 25 mm.

5.4.5.7 Immediately before the ends of a splice joint are welded up or permanently fishplated, the splice joint gap shall be adjusted to suit the measured rail temperature. The required gap size shall be calculated as follows :

a) The gap must be 50 mm at temperature X°C, where X°C is the lower end of range A in Annexure H of specification E.10 Gen.

b) With long welded rails at both ends, open the gap 1 mm for each degree Centigrade less than X°C or close the gap 1 mm for each degree more than X°C.

(c) With long welded rails at one end only, open the gap 1 mm for every two degrees Centigrade less than X°C or close the gap 1 mm for every two degrees more than X°C.

5.4.5.8 When destressing is necessary, it shall be done by the Contractor as soon as possible after the rails have been laid, unless otherwise instructed by the Engineer.

5.4.6 ADDITIONAL REQUIREMENTS FOR RERAILING

5.4.6.1 Rerailing may only take place when the track is within the B-standard. When only one leg is rerailed, the other leg must be loosened and destressed at the same time. When the Contractor elects to rerail outside of the specified temperature range, subsequent destressing will be for his account.

5.4.6.2 Prior to the start of an occupation for rerailing, where the existing rails are shorter than 36 m, the Engineer may arrange that the Contractor may loosen the fastenings of two out of three consecutive sleepers over that length of track which is to be rerailed during the occupation.

5.4.6.3 Where a track is rerailed but not resleepered, the Contractor shall respace three sleepers on either side of the new joints before or as soon as possible after the new rails have been laid.

5.4.6.4 The Contractor shall insert temporary closure rails whenever and wherever required to enable trains to pass and at the end of the rerailing operation each day.

5.4.6.5 Temporary closure rails inserted to allow trains to pass during rerailing shall be secured to all supporting sleepers. Fishbolt holes shall be drilled in such temporary closure rails and the fishplates shall be bolted thereto and fastened by at least two approved clamps to the existing and new rails at each joint. Expansion gaps 15 mm wide shall be left at all temporarily fishplated joints in long-welded rails laid within the destressing range.

5.4.6.6 If a temporary closure rail is left in the track overnight, both ends shall be fishplated and fastened with four fishbolts. The length of the temporary closure rail shall be at least 4,2 m.

5.4.6.7 When rerailing the Contractor shall remove, clean and lubricate all fishplates and oil the fish bolts before they are re-used.

5.4.6.8 When rerailing with long-welded rails, the Contractor shall keep a record of rail temperatures at each quarter hour starting one hour before the start of the work and continuing until all the sleeper fastenings have been applied and/or tightened. The record shall identify each rail and shall show the time at which it was laid and the time at which the last sleeper fastening on each rail was applied and/or tightened. The record shall be signed and dated by the Contractor and handed to the Engineer on completion of the occupation.

5.5 STANDARDS

Void.

5.6 COMPLETION

Void.

6. TOLERANCES

Void.

7. TESTING

Void.

8. MEASUREMENT AND PAYMENT

8.1 BASIC PRINCIPLE

The mass of new and second-hand rails will be taken as the nominal mass per metre of new rails.

8.2 SCHEDULED ITEMS

8.2.1 Offload and distribute rails ..... Unit: m or km

The total length of individual rails offloaded and distributed will be measured.

8.2.1.1 Separate items will be scheduled for the following:

a) Each section (kg/m) and type (CrMn, UIC, etc) of rail used.
b) New and second-hand rails, of various lengths.
c) Rails in tunnels and on bridges.
d) Offloading from wagons and lorries.

8.2.1.2 The rates tendered shall include for the following:

a) Offloading and distribution of the rails.
b) Offloading rails clear of level crossings and subsequently moving them into position.
c) Leaving gaps for insulated and spliced joints.
d) Anchoring the rails and releasing the clamps holding the rails to the wagon when offloading rails.
e) After offloading is complete, securing the chutes, clamps, chains and end shields.
f) Examining and selecting pairs of secondhand rails longer than 36 m.

8.2.2 Offload and stack rails ..... Unit: m or km

The total length of individual rails offloaded and stacked will be measured.

8.2.2.1 Separate items will be scheduled for the following:

a) Each section (kg/m) and type (CrMn, UIC, etc) of rail used.
b) New and second-hand rails, of various lengths.
c) Released rails.
d) Rails in tunnels and on bridges.
e) Offloading from wagons and lorries at stacking points.

f) Offloading from lorries into wagons.

8.2.2.2 The rates tendered shall include for the following:

a) Clearing the site of all rubbish and vegetation.
b) Removing rails from wagons and lorries and placing them on the ground or on dunnage.
c) Providing dunnage.

8.2.3 Load from stack, transport and distribute rails ..... Unit: m or km. km

The total length of individual rails loaded, transported and distributed will be measured.

8.2.3.1 Separate items will be scheduled for the following:

a) Each section (kg/m) and type (CrMn, UIC, etc) of rail used.
b) New and second hand rails, of various lengths.
c) Rails in tunnels and on bridges.
d) Offloading rails clear of level crossings and subsequently moving into position.
e) Leaving gaps for insulated and spliced joints.
f) Transport with wagons and lorries.

8.2.3.2 The rates tendered shall include for the following:

a) Loading the rails.
b) Offloading and distributing the rails.

8.2.4 Offload and distribute rail fastenings ..... Unit: Joint

Each rail joint offloaded and distributed will be counted.

8.2.4.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Junction fishplates.
c) Rail fastenings in tunnels and on bridges.

8.2.4.2 The rates tendered shall include for the following:

a) Offloading of all fishplates, bolts, nuts and washers necessary to join rails.
b) Distribution of the fishplates, bolts, nuts and washers.

8.2.5 Offload and stack rail fastenings ..... Unit: Joint

Each rail joint offloaded and stacked will be counted.

8.2.5.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Junction fishplates.
c) Released rail fastenings.
d) Offloading from wagons and lorries at stacking points.

f) Offloading from lorries into wagons.

8.2.5.2 The rates tendered shall include for the following:

a) Clearing the site of all rubbish and vegetation.
b) Removing the rail fastenings from wagons and lorries and placing them on the ground or dunnage.
c) Loading the rail fastenings from lorries into wagons.
d) Providing dunnage.

8.2.6 Load from stack, transport and distribute rail fastenings..... Unit: Joint.km

Each rail joint loaded, transported and distributed will be counted.

8.2.6.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Junction fishplates.
c) Rail fastenings in tunnels and on bridges.
d) Transport with wagons and lorries.

8.2.6.2 The rates tendered shall include for the following:

a) Loading the rail fastenings.
b) Transport thereof over freehaul distance.
c) Offloading and distributing the rail fastenings.

8.2.7 Offload and distribute splice joints ..... Unit: Each

Each splice joint offloaded and distributed will be counted.

8.2.7.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Each type of spliced joint used.

8.2.7.2 The rates tendered shall include for the following:

a) Offloading and distributing of all components to build and/or install the splice joint.

8.2.8 Offload and stack splice joints ..... Unit: Each

Each splice joint offloaded and stacked will be counted.

8.2.8.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Each type of splice joint used.
c) Released splice joints.

d) Offloading from wagons and lorries at stacking points.
e) Offloading from lorries into wagons.

8.2.8.2 The rates tendered shall include for the following:

a) Clearing the site of all rubbish and vegetation.
b) Removing the splice joints from wagons and lorries and placing them on the ground or on dunnage.
c) Providing dunnage.

8.2.9 Load from stack, transport and distribute splice joints ..... Unit: Each.km

Each splice joint loaded, transported and distributed will be counted.

8.2.9.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Each type of splice joint used.
c) Splice joints in tunnels and on bridges.
d) Transport with wagons and lorries.

8.2.9.2 The rates tendered shall include for the following:

a) Loading the splice joints.
b) Transport thereof over freehaul distance.
c) Offloading and distributing the splice joints.

8.2.10 Straighten second-hand rails ..... Unit: m or km

The length of rail straightened to which the Engineer has agreed that it should be straightened will be measured.

8.2.10.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Rails in tunnels and on bridges.

8.2.10.2 The rates tendered shall include for the following:

a) Supporting the rails for straightening.
b) Straightening all kinks and bends to within the limits specified.

8.2.11 Curve the rails ..... Unit: m or km

The actual length of rail curved and which required curving in accordance with this specification will be measured.

8.2.11.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Rails 18 m and shorter.

c) Rails longer than 18 m.
d) Rails in tunnels and on bridges.
e) Check rails.

8.2.11.2 The rates tendered shall include for the following:

a) Supporting the rails for curving.
b) Curving the rails.

8.2.12 Lay rails in new track ..... Unit: m or km

The total length of individual rails laid will be measured.

8.2.12.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) New and second-hand rails.
c) Rails 36m and shorter.
d) Rails longer than 36 m.
e) Rails in tunnels and on bridges.
f) Check rails.

8.2.12.2 The rates tendered shall include for the following:

a) Moving the distributed rails and laying both rails on the sleepers.
b) Selecting and sorting second-hand rails and lay them with the better running edge on the gauge side.
c) Selecting and sorting second-hand check rails and laying them with the better edge facing the running edge of the rail on the inside of the curve.
d) Measuring the rail temperature, and inserting and removing the shims necessary for the correct expansion gaps.
e) Cutting rails to the required length, where necessary, by any approved method.
f) Inserting temporary closure rails.
g) Installing the sleeper fastenings.
h) Bending the extreme ends of the check rails as directed.
i) Chamfering check rails as specified.
j) Installing foot guards where specified.

8.2.13 Install rail fastenings..... Unit: Joint.

Each rail joint installed will be counted.

8.2.13.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Junction fishplates.
c) Rails in tunnels and on bridges.

8.2.13.2 The rates tendered shall include for the following:

a) Drilling the fishbolt holes and removing all burrs.
b) Cleaning and lubricating the fishplates and oiling the bolts and nuts.
c) Fitting the fishplates using the bolts, nuts and washers supplied and tightening to the specified torque.

8.2.13.3 No payment will be made for holes drilled incorrectly.

8.2.14 Install junction rails or closures ..... Unit: Each

Each junction rail or closure installed will be counted.

8.2.14.1 Separate items will be scheduled for the following:

a) Each type of junction rail or closure.

8.2.14.2 The rates tendered shall include for the following:

a) Cutting rails to the required length, where necessary, by any approved method.
b) Laying the junction rail or closure on the sleepers.
c) Fastening the sleeper fastenings.

8.2.15 Replace existing individual rails ..... Unit: m or km

The total length of individual rails laid will be measured.

8.2.15.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) New and second-hand rails.
c) Rails 36m and shorter.
d) Rails longer than 36 m.
e) Rails in tunnels and on bridges.
f) Check rails.

8.2.15.2 The rates tendered shall include for the following:

a) Removing traction and/or signalling bonds.
b) Removing and refitting sleeper fastenings.
c) Removing the existing rails and rail fastenings.
d) Selecting and sorting second-hand rails and laying them with the better running edge on the gauge side.
e) Measuring the rail temperature, and inserting and removing the shims necessary for the correct expansion gaps.
f) Selecting and sorting second-hand check rails and laying them with the better edge facing the running edge of the rail on the inside of the curve.
g) Cutting rails to the required length where necessary, by any approved method.
h) Inserting temporary closure rails unless otherwise specified by the Engineer.
i) Chamfering check rails.
j) Bending the extreme ends of the check rails as directed.

k) Installing foot guards.
l) Loosening the sleeper fastenings on the other rail when only one leg is rerailed.

8.2.16 Respace existing sleepers at new rail joints when re-railing is done without re-sleepering .....Unit: sleeper

Each sleeper respaced wil be counted.

8.2.16.1 Separate items will be scheduled for the following:

a) Class of track.
b) Concrete sleepers.
c) Wood sleepers.
d) Steel sleepers.

8.2.12.2 The rates tendered shall include for the following:

a) Opening up track.
b) Loosening and refitting the sleeper fastenings.
c) Moving the sleeper to the correct position.
d) Tamping the ballast below the sleepers.

8.2.17 Fit traction and/or signalling bonds .....Unit: each

Each traction and/or signalling bond installed will be counted.

8.2.17.1 Separate items will be scheduled for the following:

a) Traction bonds.
b) Signalling bonds.

8.2.17.2 The rates tendered shall include for the following:

a) Fitting each bond where and how as specified by the Engineer.

8.2.18 Install splice joints.....Unit: each

Each splice joint unit installed will be counted.

8.2.18.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail used.
b) Each type of spliced joint used.

8.2.18.2 The rates tendered shall include for the following:

a) Removing the temporary closure rail and inserting the splice joint.
b) Moving the sleepers to the correct spacing and tamping them.
c) Cutting the rails, drilling holes, measuring temperatures and setting the gaps.

8.2.19 Load released and surplus rails..... Unit: m or km

The total length of individual released and surplus rails will be measured.

8.2.19.1 Separate items will be scheduled for the following:

a) Each section (kg/m) and type (CrMn, UIC, etc) of rail used.
b) Specified lengths of rails cut.
c) Rails in tunnels and on bridges.
d) Loading rails into wagons, or onto rakes (36 m and longer).
e) Loading rails into lorries.

8.2.19.2 The rates tendered shall include for the following:

a) Cutting the rails to the specified length.
b) Loading the rails.

8.2.20 Load released and surplus rail fastenings ..... Unit: Joint

Each released and surplus rail fastening will be counted.

8.2.20.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of joint loaded.
b) Junction fishplates.
c) Rail fastenings in tunnels and on bridges.
d) Loading the rail fastenings into wagons.
e) Loading the rail fastenings into lorries.

8.2.20.2 The rates tendered shall include for the following:

a) Loading the released and surplus rail fastenings.

8.2.21 Load released and surplus splice joints ..... Unit: Each

Each released and surplus splice joint will be counted.

8.2.21.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of splice joint loaded.
b) Each type of splice joint released or surplus.
c) Splice joints in tunnels and on bridges.
d) Loading the splice joints into wagons.
e) Loading the splice joints into lorries.

8.2.21.2 The rates tendered shall include for the following:

a) Loading the released and surplus splice joints.

8.2.22 Transport released and surplus rails with lorries ..... Unit: m or km.km

The total length of individual released and surplus rails transported with lorries will be measured.

8.2.22.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of rail transported.
b) New and second-hand rails.

8.2.22.2 The rates tendered shall include for the following:

Transporting the released and surplus rails.

8.2.23 Transport released and surplus rail fastenings with lorries ..... Unit: Joint.km

Each released and surplus rail fastening transported with lorries will be counted.

8.2.23.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of joint transported.
b) Junction fishplates.

8.2.23.2 The rates tendered shall include for the following:

Transporting the released and surplus rail fastenings over freehaul distance.

8.2.24 Transport released and surplus splice joints with lorries ..... Unit: Each.km

Each released and surplus splice joint transported with lorries will be counted.

8.2.24.1 Separate items will be scheduled for the following:

a) Each section (kg/m) of splice joint transported.
b) Each type of splice joint transported.

8.2.24.2 The rates tendered shall include for the following:

Transporting the released and surplus splice joints over freehaul distance.