



**भारत सरकार**  
GOVERNMENT OF INDIA  
**रेल मंत्रालय**  
MINISTRY OF RAILWAYS

**भारतीय रेल एकीकृत मानक दर अनुसूची**  
(फॉर्मेशन कार्य, पुल कार्य एवं पी. वे कार्य)

**Indian Railways**  
**Unified Standard Schedule Of Rates**  
(Formation Works, Bridge Works and P.Way Works)

**मूल दर शीट**  
**Basic Rate Sheet**

इंजीनियरिंग विभाग  
Engineering Department

**2019**

**Indian Railways**  
**Unified Standard Schedule Of Rates for Formation works, Bridge works and**  
**P. Way Works**  
**"Basic Input Data Sheet"**  
**for Rates Of Basic Items Used For 'Analysis Of Rates'**  
(Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
	<b>Man Power :</b>			
1	Draftsman / Surveyor	Day	0001	1500.00
2	P.Way Supervisor	Day	0002	1000.00
3	Mate (Skilled)	Day	0003	593.00
4	Black Smith (Skilled)	Day	0004	593.00
5	Painter (Skilled)	Day	0005	593.00
6	Mason (Skilled)	Day	0006	593.00
7	Carpenter (Skilled)	Day	0007	593.00
8	Grinderman (Skilled)	Day	0008	593.00
9	Welder (Skilled)	Day	0009	593.00
10	Moulder (Skilled)	Day	0010	593.00
11	Chipper (Skilled)	Day	0011	593.00
12	Lutter (Skilled)	Day	0012	593.00
13	Aligner (Skilled)	Day	0013	593.00
14	Hammer man (Semi-skilled)	Day	0014	506.00
15	Trolly man (Semi-skilled)	Day	0015	506.00
16	Helper (Semi-skilled)	Day	0016	506.00
17	Look Out Man (Un-skilled)	Day	0017	448.00
18	Waterman (Un-skilled)	Day	0018	448.00
19	Patrolman (Un-skilled)	Day	0019	448.00
20	Unskilled Labour	Day	0020	448.00
21	Electrician (Skilled)	Day	0021	593.00
22	Machinist (operator)	Day	0022	593.00
23	Caution man (Un-skilled)	Day	0023	448.00
24	Safaiwala (Un-skilled)	Day	0024	448.00
25	Crane Operator	Day	0025	593.00
26	Asst. Crane Operator (Semi-skilled)	Day	0026	506.00
27	Head Trolley man (Skilled)	Day	0027	593.00
28	Track Machine Maintainer	Day	0028	506.00
29	Bandhani	Day	0029	506.00
30	Driver (for Road Roller, Concrete Mixer, Truck etc.)	Day	0030	593.00
31	Mate	Day	0031	506.00
32	Mason (Brick / Stone Layer) 1st class	Day	0032	593.00
33	Mason (Brick / Stone Layer) 2nd class	Day	0033	506.00
34	Bhisti	Day	0034	506.00
35	Blacksmith- 1st Class	Day	0035	593.00
36	Blacksmith- 2nd Class	Day	0036	506.00
37	Chowkidar	Day	0037	506.00
38	Beldar	Day	0038	448.00
39	Coolie	Day	0039	448.00
40	Fitter Grade-1	Day	0040	593.00
41	Fitter Grade-2	Day	0041	506.00
42	Mistry	Day	0042	506.00
43	Rock Excavator	Day	0043	506.00
44	Rock Breaker	Day	0044	506.00
45	Rock Hole Driller	Day	0045	506.00
46	Stone Chiseller	Day	0046	506.00
47	Beldar (Skilled)	Day	0047	506.00
48	Carpenter (average)	Day	0048	506.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
49	Operator (Machine)	Day	0049	593.00
50	USFD Operator (With approved Certificate)	Day	0050	1500.00
	<b>Materials and Hire Charges</b>			
51	Soil Quality Class SQ1 suitable for sub grade of embankment as per RDSO Specifications GE:G-14	Cum	0075	125.00
52	Soil Quality Class SQ2 suitable for sub grade of embankment as per RDSO Specifications GE:G-14	Cum	0076	140.00
53	Soil Quality Class SQ3 suitable for sub grade of embankment as per RDSO Specifications GE:G-14	Cum	0077	150.00
54	Blasting Powder	Kg	0078	50.00
55	Blasting Fuse (Fuse Wire)	Each	0079	20.00
56	Bentonite powder	MT	0080	4025.00
57	Hire charges of Hydraulic Excavator including maintenance and cost of fuel / lubricants & operators for running	Day	0081	7000.00
58	Hire charges of Vibratory Hammer attachment of Hydraulic Excavator for Sheet pile driving	Day	0082	700.00
59	Hire and running charges of loader of 1.70 Cum bucket capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0083	7000.00
60	Hire and running charges of Tipper 12 Cum Capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0084	7000.00
61	Hire charges of Motor grader 3.35 metre blade	Hour	0085	2450.00
62	Hire charges of Water tanker 5 to 6KL capacity	Hour	0086	150.00
63	Hire Charges of Vibratory roller 8 to 10 tonne	Hour	0087	600.00
64	Hire charges of Road Roller 8-10 tonnes	Hour	0088	400.00
65	Hire Charges of Wet Mix Plant 60 TPH Capacity	Hour	0089	800.00
66	Hire charges of dozer of 80 HP capacity	Hour	0090	500.00
67	Hiring of JCB including fuel & maintenance alongwith operators	Hour	0091	950.00
68	Hire charges of Derrick Monkey Rope	Day	0092	900.00
69	Hire charges of Multi Utility Vehicle (loading capacity 1 MT) including maintenance excluding cost of fuel/lubricants & operators	Day	0093	300.00
70	Hire Charges of Truck - 9 tonne Payload without POL	Day	0094	1500.00
71	Hiring of 4.5 MT capacity Truck including maintenance excluding cost of fuel/lubricants & driver for 24 Hours availability	Month	0095	16000.00
72	Hire charges of Diesel Truck - 10 tonne	Day	0096	4000.00
73	Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories etc. and shifting at site including maintenance and cost of fuel / lubricants & operators for running	Day	0097	1900.00
74	Hire and running charges of Hydraulic Piling Rig with power unit etc. including complete accessories and shifting at site including maintenance and cost of fuel / lubricants & operators for running	Day	0098	40000.00
75	Hire and running charges of Bentonite pump	Day	0099	5000.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
76	Hire charges of air compressor 250 cfm capacity with two leads for pneumatic cutters / hammers including maintenance and cost of fuel / lubricants & operators for running	Day	0100	4000.00
77	Mobile Concrete Batching/Mixing Plant @ 20 cum/hour	Hour	0101	1400.00
78	Concrete Pump	Hour	0102	900.00
79	Transit Mixer 4 cum capacity	Hour	0103	2140.00
80	Pumping charges of concrete including hire charges of pump, piping work & accessories etc.	Cum	0104	150.00
81	Hire charges of Concrete Mixer 0.25 to 0.40 cubic metre capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0105	1200.00
82	Hire charges of Generator 2.5 KVA	Day	0106	300.00
83	Hire charges of Generator 5 KVA	Day	0107	500.00
84	Hire charges of 7.5 KVA Generator with Diesel and other consumables	Day	0108	2000.00
85	Hire charges of DG set 25 KVA including maintenance and cost of fuel / lubricants & operators for running	Day	0109	2400.00
86	Hire charges for 3 phase generator (60 KV) at bridge site including consumables, tools, plants, operator, batta and transportation to site of work	Day	0110	5000.00
87	Hire Charges of Generator 100 KVA/125 KVA	Day	0111	6000.00
88	Hire charges of Generator of 250 KVA capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0112	7000.00
89	Hire charges for Power pack with 200 litres capacity tank with 10 HP 3 phase induction mortar, inlet, out let valves pressure gauges, hose pipes etc for pushing arrangement including consumables, tools, plants, operator, and transportation to site of work	Day	0113	5265.00
90	Hire charges of Pin Vibrator	Day	0114	450.00
91	Hire charges of surface vibrator	Day	0115	560.00
92	Hire charges for tractor with trolley (alongwith fuel &	Day	0116	900.00
93	Hire charges of tractor with Ripper arrangement including maintenance and cost of fuel / lubricants & operators for running	Day	0117	2500.00
94	Hire charges of Power driven hammer drill	Day	0118	1500.00
95	Hire charges of Vibratory Hand Rammers / compactors	Day	0119	450.00
96	Hire charges of cement / epoxy slurry injection machine	Day	0120	600.00
97	Hire charges of pump set of capacity 4000 litre per hour	Day	0121	900.00
98	Hire and running charges of light crane upto 5 MT capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0122	4000.00
99	Hire charges of Crane 10T capacity	Day	0123	5000.00
100	Hire and running charges of 12 MT Hydra and accessories including maintenance and cost of fuel / lubricants & operators for running	Day	0124	5000.00
101	Hire and running charges of 12 MT crane and accessories including maintenance and cost of fuel / lubricants & operators for running	Day	0125	6000.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
102	Hire and running charges of 10MT crane with Grab Bucket of 0.75 cum capacity and accessories including maintenance and cost of fuel / lubricants & operators for running	Day	0126	7000.00
103	Hiring and running charges of Crane 20 MT capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0127	7000.00
104	Hiring and running charges of Crane 50 MT capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0128	8500.00
105	Hiring charges of 80MT capacity crane including maintenance and cost of fuel / lubricants & operators for running	Day	0129	15000.00
106	Hiring charges of 100MT capacity crane including maintenance and cost of fuel / lubricants & operators for running	Day	0130	32000.00
107	Hiring charges of 150MT capacity crane including maintenance and cost of fuel / lubricants & operators for running	Day	0131	100000.00
108	Hire charges of 400MT capacity Telescopic Hydraulic Crane including maintenance and cost of fuel / lubricants & operators for running	Day	0132	350000.00
109	Hiring of Tractor truck of 20 MT capacity including maintenance and cost of fuel / lubricants & operators for running	Day	0133	8000.00
110	Hire charges of Hydraulic jack 8/10 Tonnes capacity	Day	0134	300.00
111	Hire charges for jack of 40 MT lifting capacity	Day	0135	800.00
112	Hire charges for jack of 100 MT lifting capacity	Day	0136	2000.00
113	Hire charges for 200 MT capacity Jack	Day	0137	1500.00
114	Hire charges of Camber Jacks etc.	Day	0138	500.00
115	Hire charges of stressing jack with pump for stressing of HTS cables in PSC girders/slabs.	Day	0139	11500.00
116	Hire charges of grout pump with agitator and accessories	Hour	0140	500.00
117	Vertical load testing (Initial) of Piles in accordance with IS:2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per drawing and specification for upto 50MT capacity pile	Each	0141	40000.00
118	Vertical load testing (Initial) of Piles in accordance with IS:2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per drawing and specification for above 50MT and upto 100MT	Each	0142	45000.00
119	Cyclic vertical load testing of Piles in accordance with IS:2911 (Part-IV) including preparation of pile head etc. for single pile upto 50T capacity	Each	0143	15000.00
120	Cyclic vertical load testing of Piles in accordance with IS:2911 (Part-IV) including preparation of pile head etc. for single pile above 50T capacity and upto 100T capacity	Each	0144	23000.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
121	Lateral load testing of single Pile in accordance with IS:2911 (Part-IV) for determining safe allowable lateral load on pile upto 50T load capacity	Each	0145	15000.00
122	Lateral load testing of single Pile in accordance with IS:2911 (Part-IV) for determining safe allowable lateral load on pile above 50 Tonne load capacity	Each	0146	23600.00
123	Pulse Echo Test (PET) for integrity testing of piles with contractor's men, materials and machines. The rate includes cost of Inspection of site, preparation of pile head and any other unforeseen cost required for the test, submission of reports in triplicate as per satisfaction of the Engineer in Charge at site.	Each	0147	2170.00
124	Doob grass	Sqm	0148	29.00
125	Sarkanda/ Sarpat	Sqm	0149	45.00
126	Grass sods	Sqm	0150	46.00
127	Non-woven Needle Punched and Mechanically or Thermally bonded type Geotextile for use as Separator/Filtration for Railway formation as per RDSO Specification No. RDSO/2018/GE:IRS-0004 - Part I with minimum strengths in Grab test, Trapezoidal Tear test and Puncture test of 700N, 250 N and 1800 N respectively.	Sqm	0151	90.00
128	Non-woven Needle Punched and Mechanically or Thermally bonded type Geotextile for use as Separator/Filtration for Railway formation as per RDSO Specification No. RDSO/2018/GE:IRS-0004 - Part I with minimum strengths in Grab test, Trapezoidal Tear test and Puncture test of 1750N, 800 N and 5800 N respectively.	Sqm	0152	170.00
129	Geo-composite drain consisting of Geonet Core sandwiched between Non-Woven geo textile filters on both sides as per RDSO Specification No. RDSO/2018/GE:IRS-0006	Sqm	0153	450.00
130	Mechanically woven double twisted hexagonal shaped wire mesh gabion boxes of required sizes with 10mm x 12mm mesh of wire dia 2.7mm/3.7mm (ID/OD) and Zn & PVC coated	Cum	0154	1495.00
131	Diesel (HSD) Oil	Litre	0155	72.00
132	Normal unleaded Petrol	Litre	0156	70.00
133	Hydraulic oil ( Servo system-68 )	Litre	0157	150.00
134	Hydraulic oil SS-68 or equivalent of HPCL/BPCL/IOCL	Litre	0158	91.00
135	Grease Graphite Grade 'O' (IS:408)	Kg	0159	200.00
136	Kerosene Oil	Litre	0160	40.00
137	Lubricating Oil Servo or equivalent	Litre	0161	120.00
138	Mobile Oil	Litre	0162	315.00
139	Grease MP-2 or equivalent of HPCL/BPCL/IOCL	Kg	0163	124.50
140	Ordinary Portland Cement 43 grade	MT	0164	4940.00
141	Ordinary Portland Cement 53 grade	MT	0165	5000.00
142	Pozzolana Portland Cement	MT	0166	4700
143	Sulphate Resisting Cement	MT	0167	6500
144	Plasticiser / Super Plasticiser	Kg	0168	80.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
145	Admixture (anti shrinkage compound) for CC/RCC work	Kg	0169	140.00
146	Synthetic polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 including labour for mixing	Kg	0170	400.00
147	Waterproofing compound ESI Permakar 3	Kg	0171	207.00
148	Muriatic Acid	Kg	0172	23.00
149	Surface protection material ESI Permaproof	Litre	0173	253.00
150	Surface protection material ESI Permacyl -GA	Litre	0174	272.55
151	Surface protection material ESI Bond	Litre	0175	278.30
152	Cost of filled bags including material as sand or earth for kentledge purpose.	1000 nos.	0176	5000.00
153	Filled sand bags (30 kg weight)	Each	0177	9.00
154	Coarse Sand (Zone III)	Cum	0178	800.00
155	Fine Sand (Zone IV)	Cum	0179	1100.00
156	Screened Sand	Kg	0180	2.50
157	Stone Aggregate (single size) 63mm nominal	Cum	0181	900.00
158	Stone Aggregate (Single size) : 40 mm nominal size	Cum	0182	750.00
159	Stone Aggregate (Single size) : 20 mm nominal size	Cum	0183	850.00
160	Stone Aggregate (Single size) : 10 mm nominal size	Cum	0184	850.00
161	Stone Aggregate (Single size) : 06 mm nominal size	Cum	0185	650.00
162	Stone grit 6mm and down size or pea sized gravel	Cum	0186	600.00
163	Cost of Crusher Screening(Quarry Dust) Conforming to Grading Zone - I to Zone- II	Cum	0187	600.00
164	Stone boulder, weighing minimum 35 kg each	Cum	0188	750.00
165	Stone Spalls	Cum	0189	445.00
166	Filter media of stone aggregate confirming to RDSO specification (12 cum loose to be taken as 10 cum after compaction)	Cum	0190	1200.00
167	Low relaxation H T Strands conforming to IS 14268 latest version for prestressed concrete	MT	0191	57000.00
168	CRCA Sheathing	Metre	0192	165.00
169	HDPE Sheathing	Metre	0193	275.00
170	Tube anchorage set complete with bearing plate , permanent wedges etc.	Each	0194	1320.00
171	MS round bar for reinforcement- average rate for various dia	Quintal	0195	3600.00
172	Thermo Mechanically Treated Bars grade Fe 500D - or more.(Average of dia 10mm to 25mm) without GST	Quintal	0196	3910.00
173	G.I. Binding wire	Kg	0197	51.75
174	Structural Steel Plates conforming to Grade Designation E 250; Quality "A" as per IS 2062	Quintal	0198	3700.00
175	Structural steel such as T, Angles, Channels and R S Joists conforming to Grade Designation E 250; Quality "A" as per IS 2062	Quintal	0199	3800.00
176	Structural steel plates conforming to Grade Designation E250; Quality "B0" as per IS:2062,	Quintal	0200	4300.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
177	Structural steel such as T, Angles, Channels and R S Joists conforming to Grade Designation E250; Quality "B0" as per IS:2062,	Quintal	0201	4400.00
178	Structural steel such as T, Angles, Channels and R S Joists conforming to Grade Designation E 250; Quality "C" as per IS 2062	Quintal	0202	4500.00
179	Structural steel such as T, Angles, Channels and R S Joists conforming to Grade Designation E250; Quality "BR" as per IS:2062,	Quintal	0203	4200.00
180	Structural Steel such as T, Angles, Channels and R S Joists Grade Designation E350; Quality 'B0' as per IS 2062	Quintal	0204	4600.00
181	M S Flat upto 10 mm thickness	Quintal	0205	3700.00
182	HSFG bolt with DTI Washers	Kg	0206	220.00
183	Mild steel rivets for steel girders	Quintal	0207	6540.00
184	Rivets (different sizes) for miscellaneous works.	Kg	0208	54.50
185	Nut & Bolts with washers of all sizes	Kg	0209	80.00
186	20mm dia holding down bolt	Quintal	0210	8000.00
187	Holding down HTS bolts with plates, nuts etc.	Quintal	0211	7500.00
188	Aluminum Sheet / Strips of various sizes & thickness	Kg	0212	200.00
189	GI Sheet 1.50 mm thick	Quintal	0213	4600.00
190	Mild steel chequered plate	MT	0214	42500.00
191	Polyvinyl chloride sheet 400 micron.	Sqm	0215	40.25
192	Z section sheet piles AZ 18-800 (Arcelor Mittal) or equivalent & bracing	Quintal	0216	4500.00
193	G.I. wire 4mm dia	Kg	0217	70.00
194	Galvanized MS holding down bolts with nuts, two coats of electroplating 18 to 20 mm dia	Kg	0218	70.00
195	Bolts & Nuts (below 10mm dia)	Kg	0219	60.00
196	MS bolts & nuts upto 300 mm length	Quintal	0220	8500.00
197	Copper slag	MT	0221	3900.00
198	100mm channel shoulder 2.5 m long (Shuttering material)	Each	0222	1322.50
199	MS tube 40mm dia (Shuttering material)	Metre	0223	293.25
200	Wall form Panel 1250mm x 450mm (Shuttering material)	Each	0224	1150.00
201	Adjustable telescopic prop 3m (2.02m-3.75m) (Shuttering material)	Each	0225	1265.00
202	Beam Clamp 300-380mm (450mm-1070mm) (Shuttering material)	Set	0226	454.25
203	Cadmium plated full threaded steel screws (30mm x 4mm dia) (Shuttering material)	100 nos.	0227	35.65
204	Aluminium washer 2mm thick & 15 mm dia (Shuttering material)	100 nos.	0228	28.75
205	uPVC Pipe- type A ISI marked 110mm dia (working pressure 4Kg/cm <sup>2</sup> )	Metre	0229	160.00
206	uPVC Pipe- type A ISI marked 160mm dia	Metre	0230	350.00
207	GI Pipe 50 mm dia , B Class Medium duty	Metre	0231	315.35



## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
208	GI Pipe 100 mm dia , B Class Medium duty	Metre	0232	731.55
209	Clamps and MS stays including bolts and nuts for 100mm dia pipe	Each	0233	90.00
210	Clamps and MS stays including bolts and nuts for 50mm dia pipe	Each	0234	53.00
211	C I grating 100mm x 100mm	Each	0235	75.00
212	Hire charges for sand receiver and sand blasting pipes with gun and all accessories complete	Day	0236	500.00
213	Hire charges for metalising gun with all accessories	Day	0237	600.00
214	Etch primer as per IS: 5666	Litre	0238	340.00
215	Aluminium wire for spraying	Kg	0239	219.93
216	Elastomeric bearing assembly consisting of 7 layers of Elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation, complete with all components as per drawing and Technical Specification (Each of 19200 Cu Cm)	Each	0240	19200
217	Cast steel rocker bearing assembly of 250 tonne design load capacity duly painted complete with all its components as per drawing and specifications	Each	0241	110000.00
218	Forged steel roller bearing of 250 tonne design load capacity duly painted complete with all its components as per drawing and specifications	Each	0242	120000.00
219	PTFE sliding plate bearing assembly of 80 tonnes design load capacity duly painted complete with all its components as per drawing and Technical Specifications	Each	0243	98300.00
220	300 MT Capacity Pot Cum PTFE Bearing (Free end ) assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly comprising of stainless steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess(s) on the piston with internal seal (Brass laminated rings), hard facings, external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0244	57880
221	300 MT Capacity Pot cum PTFE bearing (Fixed type) assembly consisting of a metal piston supported by un reinforced elastomer confined in the pot with brass ring sealing making with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0245	83045

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
222	300 MT capacity Pot Cum PTFE GUIDED (L) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings, external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0246	101185
223	300 MT capacity Pot Cum PTFE GUIDED(T) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0247	96790
224	250 MT Capacity Pot Cum PTFE Bearing (Free end ) assembly consisting of a metal piston supported by a disc of unreinforced elastomer that is confined with in the metal cylinder and sliding assembly comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0248	47380
225	250 MT Capacity Pot type bearing (Fixed) assembly consisting of a metal piston supported by un reinforced elastomer confined in the pot with brass ring sealing making with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0249	62045
226	250 MT Capacity Pot Cum PTFE GUIDED(L)Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0250	77390

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
227	250MT Capacity Pot Cum PTFE GUIDED(T) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0251	72695
228	200 MT Capacity Pot Cum PTFE Bearing (Free end) assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0252	36655
229	200 MT Capacity Pot type bearing (Fixed type) assembly consisting of a metal piston supported by un reinforced elastomer confined in the pot with brass ring sealing making with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0253	45025
230	200 MT Capacity Pot Cum PTFE GUIDED(L) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0254	57140
231	200 MT Capacity Pot Cum PTFE GUIDED(T) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0255	52805

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
232	150 MT Capacity Pot Cum PTFE Bearing (Free end ) assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0256	25320
233	150MT Capacity Pot type bearing (Fixed type) assembly consisting of a metal piston supported by un reinforced elastomer confined in the pot with brass ring sealing making with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0257	29985
234	150MT Capacity Pot Cum PTFE GUIDED(L)Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0258	38745
235	150MT Capacity Pot Cum PTFE GUIDED(T)Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0259	35760
236	100MT Capacity Pot Cum PTFE Bearing (Free end ) assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s)on the piston with internal seal (Brass laminated rings),hard facings ,external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0260	16350

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
237	100MT Capacity Pot type bearing (Fixed type) assembly consisting of a metal piston supported by un reinforced elastomer confined in the pot with brass ring sealing making with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0261	17385
238	100MT Capacity Pot Cum PTFE GUIDED(L) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0262	25625
239	100MT Capacity Pot Cum PTFE GUIDED(T) Bearing assembly consisting of a metal piston supported by a disc of un reinforced elastomer that is confined with in the metal cylinder and sliding assembly with guiding arrangement to bear and resist the horizontal force in the desired direction comprising of stain less steel attached to metal backing plate sliding in horizontal plane over PTFE confined in recess (s) on the piston with internal seal (Brass laminated rings), hard facings , external seal & wiper seal etc complete with cast steel assemblies/fabricated structural steel assemblies duly painted with all components complete as per drawings and Technical Specifications.	Each	0263	23350
240	300 MT Capacity Spherical fixed bearing consists of an assembly of precision machined steel components with spherical concave and convex elements in its centre designed and sized according the specific requirements .The bottom plate with a spherically concave top face covered with a recessed PTFE sheet .The top component is a solid stainless steel plate with spherically machined convex bottom face mating with concave curved surface fixed by restraining rings to restrict the horizontal movement as a complete unit made up of with Mild steel/cast iron steel/Stainless steel conforming to IS 2062 Grade -B & IS 1030 Grade 280-520W or 340-570W, AISI 304/316 shall be used for the backing plates with flat or curved surfaces.	Each	0264	65185

(Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
241	300 MT Capacity Spherical free float bearing consists of an assembly of precision machined steel components with spherical concave and convex elements in its centre designed and sized according the specific requirements .The bottom plate with a spherically concave top face covered with a recessed PTFE sheet .The top component is a solid stainless steel plate with spherically machined convex bottom face mating with concave curved surface . Sliding assembly attached consists of a polished stainless sheet welded to the under side of top steel plate slides on PTFE disc recessed or bonded to the upper surface of convex plate as complete unit made up of with Mild steel/cast iron steel/Stainless steel conforming to IS 2062 Grade -B & IS 1030 Grade 280-520W or 340-570W,AISI 304/316 shall be used for the backing plates with flat or curved surfaces, Stainless sheet shall be in accordance with AISI316L OR of IS 6911 of minimum thick 3mm	Each	0265	55860
242	300 MT Capacity Spherical Slide Guide (L) bearing consists of an assembly of precision machined steel components with spherical concave and convex elements in its centre designed and sized according the specific requirements .The bottom plate with a spherically concave top face covered with a recessed PTFE sheet .The top component is a solid stainless steel plate with spherically machined convex bottom face mating with concave curved surface . Sliding assembly with guiding system bear and transmit the horizontal force in one direction and allowing the movement perpendicular to above (Longitudinal direction) consisting of a polished stainless sheet welded to the under side of top steel plate slides on PTFE disc recessed or bonded to the upper surface of convex plate as complete unit made up of with Mild steel/cast iron steel/Stainless steel conforming to IS 2062 Grade -B & IS 1030 Grade 280-520W or 340-570W,AISI 304/316 shall be used for the backing plates with flat or curved surfaces, Stainless sheet shall be in accordance with AISI316L OR of IS 6911 of minimum thick 3mm	Each	0266	79400

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
243	300 MT Capacity Spherical Slide Guide (T) bearing consists of an assembly of precision machined steel components with spherical concave and convex elements in its centre designed and sized according the specific requirements .The bottom plate with a spherically concave top face covered with a recessed PTFE sheet .The top component is a solid stainless steel plate with spherically machined convex bottom face mating with concave curved surface . Sliding assembly with guiding system bear and transmit the horizontal force in one direction and allowing the movement perpendicular to above (Transverse direction) consisting of a polished stainless sheet welded to the under side of top steel plate slides on PTFE disc recessed or bonded to the upper surface of convex plate as complete unit made up of with Mild steel/cast iron steel/Stainless steel conforming to IS 2062 Grade -B & IS 1030 Grade 280-520W or 340-570W,AISI 304/316 shall be used for the backing plates with flat or curved surfaces, Stainless sheet shall be in accordance with AISI316L OR of IS 6911 of minimum thick 3mm	Each	0267	75560
244	Single coil spring washer for bridge bearing	Each	0268	12.00
245	Hot melt Thermo plastic paint	Litre	0269	160.00
246	Luminous Paint as per RDSO's Spec. no. M&C/PCN/120-2011	Litre	0270	300.00
247	Bituminous Paint as per RDSO's Spec. no. M&C/PCN/120-2011	Litre	0271	80.00
248	Bituminous Emulsion without Mica (IP no. 56192 and RDSO Specification no.P30-1996)	Litre	0272	200.00
249	Anti-corrosive Bituminous Paint (Black) confirming to IS:9862	Litre	0273	80.00
250	Anti-corrosive Paint as per RDSO's Specn. No. M&C/PCN/123/2012	Litre	0274	280.00
251	Enamel Paint as per RDSO's Spec. no.M&C/PCN/120-2011	Litre	0275	140.00
252	Zinc rich paint as per RDSO specification no. M&C/PCN/125-2009	Kg	0276	2300.00
253	Zinc solvent as per RDSO specification no. M&C/PCN/125-2009	Litre	0277	1800.00
254	Ready mix Zinc Chromate primer as per IS 104	Litre	0278	100.00
255	Zinc Chromate red oxide Primer to IS:2074	Litre	0279	80.00
256	Aluminium paint	Litre	0280	160.00
257	Synthetic Enamel Paint in Black or Chocolate shade	Litre	0281	288.00
258	Epoxy paint as per RDSO Spec M&C/PCN/123-11	Litre	0282	414.00
259	Ready Mixed Paint as per IS:13607	Litre	0283	228.00
260	Wire Brush - 25cm long	Each	0284	15.00
261	Soft Brush - 25cm long	Each	0285	33.00
262	Paint Brush (writing)	Each	0286	150.00
263	Industrial grade blown type Petroleum Bitumen of grade 85/25 as per IS:702	MT	0287	47000.00
264	Coal tar Emulsion	Litre	0288	40.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
265	Bitumen emulsion for road of grade RS-1 confirming to IS 8887	MT	0289	37000.00
266	Bitumen Hot sealing compound : Gr. A	MT	0290	28000.00
267	Synthetic Rubber based Adhesive	Litre	0291	160.00
268	Epoxy for fixing PVC dowel, Rubber Pads as per RDSO approved specification	Kg	0292	500.00
269	Araldite GY257	Kg	0293	379.50
270	Hardener HY850	Kg	0294	370.30
271	Paint Brush 100 mm	Each	0295	75.00
272	Paint Brush 75 mm	Each	0296	60.00
273	Paint Brush 50 mm	Each	0297	50.00
274	Paint Brush 25 mm	Each	0298	40.00
275	Supply of complete assembly of strip seal expansion joint for 40mm expansion , comprising of edge beams, anchorage, strip seal element and complete assembly as per approved specification and drawings	Metre	0299	4000.00
276	Supply of complete assembly of strip seal expansion joint for 80mm expansion , comprising of edge beams, anchorage, strip seal element and complete assembly as per approved specification and drawings	Metre	0300	5500.00
277	Supply of complete assembly of strip seal expansion joint for 120mm expansion , comprising of edge beams, anchorage, strip seal element and complete assembly as per approved specification and drawings	Metre	0301	6500.00
278	Supply of complete assembly of strip seal expansion joint for 160mm expansion , comprising of edge beams, anchorage, strip seal element and complete assembly as per approved specification and drawings	Metre	0302	8000.00
279	Hire charges of Welding Machine	Day	0303	300.00
280	Welding cable copper 50mm <sup>2</sup>	Metre	0304	110.00
281	500 Amp Arc welding Electrode holder	Each	0305	85.00
282	Welding & cutting torch	Each	0306	950.00
283	Hand gloves leather	set	0307	32.00
284	Welding Hose rubber for Oxygen/D.A. 6mm dia	Metre	0308	28.00
285	Welding screen	Each	0309	150.00
286	Welding by Electric Plant	Cm	0310	1.00
287	Commercial LPG (in cylinder)	Kg	0311	50.00
288	Oxygen Gas (in cylinder)	Kg	0312	38.00
289	Acetylene Gas (in cylinder)	Kg	0313	130.00
290	Cost of Oxygen Gas cylinders (Pressure 1800 lbs - 2000 lbs)	Each	0314	8000.00
291	Cost of D.A. Gas cylinders (Pressure 15 Kg - 20 Kg)	Each	0315	4800.00
292	Pressure Regulator for Oxygen/Acetylene cylinder	Each	0316	1450.00
293	Hire charges of gas cutter	Day	0317	100.00
294	Hard Variety Jungle Wood	10 Cudm	0318	350.00



## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
295	2nd class deodar wood in scantling (Bamboo)	10 Cudm	0319	465.00
296	Fuel wood	Quintal	0320	4000.00
297	Crack filling epoxy for guniting and pressure grouting work	Kg	0321	620.00
298	Accelerator compound for guniting	Kg	0322	140.00
299	GI/MS nipple size 12mm to 20mm dia	Each	0323	15.00
300	Pre-packed polymer concrete based on epoxy system complete with curing compound, initiator and promoter	Kg	0324	10.00
301	Epoxy mortar for concrete repair	kg	0325	20.00
302	Epoxy resin hardener mix for seal coat	Kg	0326	138.00
303	Acrylic polymer bonding coat	Litre	0327	140.00
304	Pre packed cement based polymer mortar of strength 45 Mpa at 28 days	Kg	0328	22.00
305	Wire mesh size 50mm x 50mm of 3mm wire	Kg	0329	80.00
306	Wire mesh (Rabbit)	Sqm	0330	67.20
307	Galvanised steel fibre	Kg	0331	200.00
308	Galvanised chain link mesh netting of 80mm x 80mm mesh size	Sqm	0332	180.00
309	Galvanised spiral lock spring	Each	0333	19.20
310	Epoxy coated washer plate of 200mm x 200mm x 6mm size	Each	0334	156.00
311	Anchor fastener of 10mm dia and 110mm length	Each	0335	72.00
312	Bottom anchors of 16mm dia HYSD & 1m length	Each	0336	276.00
313	Galvanised steel wire mesh rope net made of 9mm dia steel wire rope having aperture size of 45cm x 60cm with 6m length hangs	Sqm	0337	468.00
314	NP 4 Class RCC pipe 300mm dia	Metre	0338	1250.00
315	NP 4 Class RCC pipe 450mm dia	Metre	0339	1450.00
316	NP 4 Class RCC pipe 600mm dia	Metre	0340	1700.00
317	NP 4 Class RCC pipe 900mm dia	Metre	0341	2300.00
318	NP 4 Class RCC pipe 1000mm dia	Metre	0342	2750.00
319	NP 4 Class RCC pipe 1200mm dia	Metre	0343	4300.00
320	NP 4 Class RCC pipe 1800mm dia	Metre	0344	6500.00
321	Designing and developing detailed structural and working Drawings for open / Pile / well foundation for RCC column / piers for ROB/RUB/Bridges, based on Railway's approved GADs, duly designing the members and submission of check plot duly getting proof checked by Railway approved institutes.	Set	0345	17250.00
322	Designing and developing detailed structural and working Drawings for RCC bed block for ROB/RUB/Bridges, based on Railway's approved GADs, duly designing the members and submission of check plot duly getting proof checked by Railway approved institutes.	Set	0346	5175.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
323	Designing and developing detailed structural and working Drawings for foundation and sub structure for RCC retaining wall, abutment and approach slab for ROB/RUB/Bridges, based on Railway's approved GADs, duly designing the members and submission of check plot duly getting proof checked by Railway approved institutes.	Set	0347	17250.00
324	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 0-10m	Metre	0348	796.00
325	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 10m-20m	Metre	0349	836.00
326	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 20m-30m	Metre	0350	880.00
327	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 30m-40m	Metre	0351	955.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
328	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 40m-50m	Metre	0352	1100.00
329	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 50m-60m	Metre	0353	1300.00
330	Exploratory drilling of boreholes of 150mm dia. in all type of soils except hard rock / large boulders (boulder core more than 30cm), for collecting the undisturbed core sample including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata, where necessary with contractor's labour, tools, plants, machinery, equipment, consumables etc., with all lead and lift complete as per specifications and as directed by the Engineer-in-charge in Dry area 60m-70m	Metre	0354	1400.00
331	Extra for 150mm dia. bore in hard Rock/large Boulder at all levels	Metre	0355	1489.00
332	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 0m-10m	Metre	0356	2284.00
333	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 10m-20m	Metre	0357	2399.00
334	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 20m-30m	Metre	0358	2558.00
335	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 30m-40m	Metre	0359	2741.00
336	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 40m-50m	Metre	0360	2835.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
337	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 50m-60m	Metre	0361	3056.00
338	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes 60m-70m	Metre	0362	3300.00
339	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:10042 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit : Plate size- 30cm x 30cm	Each	0363	15000.00
340	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:10042 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit : Plate size- 45cm x 45cm	Each	0364	18000.00
341	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:10042 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit : Plate size- 60cm x 60cm	Each	0365	21500.00
342	Conducting in situ Vane shear test for soil as per IS:4434	Each	0366	2200.00
343	Conducting SCPT for soil as per IS:4968	Each	0367	35000.00
344	Conducting DCPT for soil as per IS:4968	Each	0368	29000.00
345	Conducting determination of California Bearing Ratio (CBR) as per IS:2720	Each	0369	1000.00
346	Taking out 100mm dia. & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS:2720.	Each	0370	103.00
347	Taking out 100mm dia. & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS:2720.	Each	0371	110.00
348	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	0372	600.00
349	Collection of water samples at required intervals	Each	0373	170.00
350	Moisture Contents/Dry Density	Each	0374	200.00
351	Atterberg Limit	Each	0375	400.00
352	Specific Gravity	Each	0376	400.00
353	Grain size analysis including Hydrometer analysis	Each	0377	550.00
354	Direct Shear Test	Each	0378	1500.00
355	Natural Density Test	Each	0379	450.00
356	Consolidation Test	Each	0380	5000.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
357	Unconfined Compression Test	Each	0381	1500.00
358	Tri-axial Test	Each	0382	1500.00
359	Density Test	Each	0383	200.00
360	Water Absorption & Porosity	Each	0384	200.00
361	Hardness Test	Each	0385	100.00
362	Unconfined Compression Test for rock	Each	0386	1500.00
363	Point Load Test	Each	0387	800.00
364	Modulus of Elasticity	Each	0388	4000.00
365	Abrasion Testing	Each	0389	450.00
366	Portable Impulse Plate Load Tester for measurement of compaction quality of soil {modulus of deformation (Evd) for correlation to Dpr%} and for evaluation of load carrying capacity in stages of formation construction; manufactured on DIN EN ISO 9001 certified production line, load plate with acceleration transducers, drop weight of 10 Kg, electronic settlement measuring instrument with measuring range Evd <225 MN/m <sup>2</sup> including PC evaluation software, thermal printer, GPS, 1000 tests internal memory, 2GB USB stick, PC connecting cable, heavy duty transportation trolley cart; all in compliance with ASTM E2835-11 for conducting in-situ impulse plate load test	Each	0390	750000.00
367	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	0391	1000.00
368	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	0392	1000.00
369	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	0393	58000.00
370	Single shot crucible	each	0394	596.00
371	Alumino Thermic welding Portion (90 R) as per IRS T-19-2012	Nos.	0395	1072.00
372	Alumino Thermic welding Portion (52 kg - 72 UTS) as per IRS T-19-2012	Nos.	0396	1196.00
373	Alumino Thermic welding Portion (52 kg - 90 UTS) as per IRS T-19-2012	Nos.	0397	1316.00
374	Alumino Thermic welding Portion (60 kg) as per IRS T-19-2012	Nos.	0398	1436.00
375	Pre-fabricated Dry Mould (90 R) as per IRS T-19-2012	Set	0399	108.00
376	Pre-fabricated Dry Mould (52 Kg) - (2 piece) as per IRS T-19-2012	Set	0400	132.00
377	Pre-fabricated Dry Mould (52 Kg) - (3 piece) as per IRS T-19-2012	Set	0401	191.00
378	Pre-fabricated Dry Mould (60 Kg) - (3 piece, Zircon Washed) as per IRS T-19-2012	Set	0402	209.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
379	52/60 Kg 3 piece mould shoe as per RDSO's Spec. no. IRS/T-19	Set	0403	2680.00
380	52 Kg 2 piece mould shoe as per RDSO's Spec. no. IRS/T-19	set	0404	2400.00
381	60 Kg 2 piece mould shoe as per RDSO's Spec. no. IRS/T-19	set	0405	2600.00
382	Mould shoe 90R 2 piece as per RDSO's Spec. no. IRS/T-19	Set	0406	1317.00
383	Luting Sand	Kg	0407	10.00
384	Closing Pin	Nos.	0408	5.00
385	Asbestos Powder	Kg	0409	250.00
386	Ignition Match	Nos.	0410	7.00
387	Rail file 15" long for filing SKV weld	Each	0411	450.00
388	CP-3032 Powder for reconditioning of scabs, wheel burns of rails and cupped AT welded joints	Kg	0412	500.00
389	H3 C Electrodes as per RDSO's Spec. no. IRS M:28-2011	Nos.	0413	65.00
390	H3 B Electrodes as per RDSO's Spec. no. IRS M:28-2011	Nos.	0414	50.00
391	H3 A Electrodes as per RDSO's Spec. no. IRS M:28-2011	Nos.	0415	35.00
392	H3 Electrodes as per RDSO's Spec. no. IRS M:28-2011	Nos.	0416	20.00
393	Hire charges of translamic robotic welding machine	Day	0417	5000.00
394	1.6mm dia core flux wire of cast manganese steel	Kg	0418	916.00
395	Hire charges of Road Cum Rail vehicle for transporting Flash Butt Welding plant	Day	0419	1000.00
396	Hire Charges for Mobile Flash Butt Welding Plant	Day	0420	55000.00
397	Hire charges of Probes, Batteries, Chargers, BNC Cables and Standard Rail test piece	Day	0421	500.00
398	Hire charges of USFD testing machine(B-Scan)	Day	0422	1000.00
399	Hire charges of USFD testing machine	Day	0423	800.00
400	10 mm thick Grooved Rubber Pads as per drg. No. RDSO/T-5199 & RDSO's Spec. no. IRS-T-47-2006 (Prov.)-1989	Each	0424	132.00
401	Galvanised steel fittings for non insulated galvanized channel sleepers (52/60 kg rail)	set	0425	1534.00
402	Galvanised steel fittings for insulated galvanized channel sleepers (52/60 kg rail)	set	0426	2000.00
403	Supply of 25/30 mm thick Elastomeric Pad	Each	0427	152.00
404	Galvanised MS liner and Outer Clip for steel channel sleeper (RDSO Drg. No. T-6150 & T-6151)	Set	0428	434.00
405	Single Coil spring washers T-10773	Each	0429	4.35
406	Galvanisation @ 705gm / sqm ( 100 Microns thick )	MT	0430	17000.00
407	Bolt Size 25 x 130 mm with nut to RDSO Drg. No. T-11501	Each	0431	43.50
408	Double Coil spring washers as per RDSO's drg. No. RT-1878	Each	0432	12.20
409	Rag Bolts 22mm dia & 190mm long as per RDSO's drg. No. T-321	Each	0433	30.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
410	Hook Bolts 28mm dia & 320mm long as per RDSO's drg. No. BA-1636/I/R2	Each	0434	35.00
411	Zero toe load galvanised fixtures for H Beam sleepers of 52/60kg Rails as per RDSO approved drawing	Set	0435	3000.00
412	Lifting Barrier assembly for 6m long Lifting Barrier, having fragmented boom, boom light boxes with suitable gate lamps, bell, Boom supports (stay wires) with adjusters, counter weight, pedestal and lock posts with foundation of 'A' type as required, turn union wheel with brackets, balance and auxiliary weights clamps etc to approved standard drawings to nos SA 7973 to 7980 with all fittings and fastenings complete (excluding fringes)	set	0436	93500.00
413	Lifting Barrier assembly for 8m long Lifting Barrier, having fragmented boom, boom light boxes with suitable gate lamps, bell, Boom supports (stay wires) with adjusters, counter weight, pedestal and lock posts with foundation of 'A' type as required, turn union wheel with brackets, balance and auxiliary weights clamps etc to approved standard drawings to nos SA 7973 to 7980 with all fittings and fastenings complete (excluding fringes)	set	0437	110500.00
414	Lifting Barrier assembly for 10m long Lifting Barrier, having fragmented boom, boom light boxes with suitable gate lamps, bell, Boom supports (stay wires) with adjusters, counter weight, pedestal and lock posts with foundation of 'A' type as required, turn union wheel with brackets, balance and auxiliary weights clamps etc to approved standard drawings to nos SA 7973 to 7980 with all fittings and fastenings complete (excluding fringes)	set	0438	128000.00
415	Winch arrangement for operation of level crossing lifting barriers, as per RDSO's approved layout having standard covering arrangement, foundation of 'A' type as required and pulleys, pulley guides and stakes, horizontal rope wheel, vertical rope wheel, wire adjusting screws wire ropes 6x6x19 with all fittings, fixtures and accessories to RDSO's approved drawings with all parts including painting of steel work as per specification(excluding excavation and concrete work)	Each	0439	25000.00
416	Auto boom locking arrangement (Single lever) for existing lifting barriers, consisting of interlocking ground frame near gate lodge, foundation of 'A' type as required and connecting ground frame to lock posts of gate booms with stipulated rodding on guide rollers, supported on trestles as per RDSO's drawings complete (Excluding excavation, concrete work)	Each	0440	11800.00
417	Auto boom locking arrangement (Double lever) for existing lifting barriers, consisting of interlocking ground frame near gate lodge, foundation of 'A' type as required and connecting ground frame to lock posts of gate booms with stipulated rodding on guide rollers, supported on trestles as per RDSO's drawings complete (Excluding excavation, concrete work)	Each	0441	16700.00
418	Railway's lifting barrier assembly of one side at level crossing	Each	0442	50000.00
419	Railway's lifting barrier assembly and boom supports, gate lamps, of one side at level crossing	Each	0443	54000.00
420	GI wire rope of 6mm dia. 6 ply to suit lifting barrier gates	Kg	0444	174.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
421	Boom Supports (stay wires) for lifting barrier (approx. 8mm dia)	Each	0445	715.00
422	4" dia round ceramic Light Reflector as per specification	Each	0446	100.00
423	Pulley with Pulley stakes complete, wire rope 6x6x19 ply with accessories as per Railway's approved drawings for operation of lifting barriers	Each	0447	200.00
424	Vertical / Horizontal Turnout Wheels and Shafts mounted over the base plate weighing not less than 6 Kg with supporting vertical base made of MS angles 75mm x 75mm x 10mm as per Railway's approved drawing and specifications	Each	0448	870.00
425	Turnout wheel- HORIZONTAL ROPE WHEEL double wire (2 way) including guides	Each	0449	1265.00
426	Galvanized STEEL WIRE ROPE for DW signalling 6 x 19 ply as per IRS No. S.11 amended upto date for lifting barrier at level crossing gates	Kg	0450	175.00
427	Precast CC Paver block -80mm thick M35 grade	Sqm	0451	460.00
428	Precast CC Paver block -120mm thick M40 grade	Sqm	0452	760.00
429	PVC Dowels	Each	0453	100.00
430	Instapatch premix	Cum	0454	14600
431	Hire charges of Hot Paint machine	Day	0455	150.00
432	Hire charges of Hydraulics press	Day	0456	500.00
433	Hire charges of off Track Tamper	Day	0457	300.00
434	Hire charges of Drill Machine	Day	0458	300.00
435	Hire charges for pillar drilling machine	Day	0459	1000.00
436	Hire charges of Electrically operated Drilling Machine	Day	0460	200.00
437	Hire charges of Concrete Sleeper Drilling Machine	Day	0461	300.00
438	Hiring of Milling machine including Fuel & Maintenance	Day	0462	1000.00
439	Hire charges of Electrically operated Cutting Machine	Day	0463	100.00
440	Hire charges of Rail Cutting Machine	Day	0464	300.00
441	High Speed Hacksaw Blade of size 300mm x 12.5mm x 0.63mm (18TPI) as per as per RDSO's Spec. no. TM/SM/26 (latest Rev.)	Nos.	0465	160.00
442	Hire charges of Abrasive Rail Cutter	Day	0466	300.00
443	Abrasive rail cutting disc as per RDSO's Spec. no. TM/SM/2	Each	0467	800.00
444	Driving belt (abrasive rail cutter)	Each	0468	600.00
445	Hire charges of Hydraulic Rail bender (Jim Crow)	Day	0469	200.00
446	Hire charges of Heavy Duty Hydraulic Extractor (10 Tonnes)	Day	0470	200.00
447	Hire charges of Hydraulic Rail tensor	Day	0471	150.00
448	Hire charges of Hydraulic Sleeper Spacer	Day	0472	200.00
449	Hire charges of Hammer Breaker	Day	0473	200.00
450	Hire charges of Grinding Machine	Day	0474	300.00
451	Grinding Stone wheel GQ6 of 150mm dia	Nos.	0475	490.00



## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
452	Hire charges of Angle Grinder	Day	0476	200.00
453	Hire charges of Rail Profile Weld Grinder	Day	0477	100.00
454	Hire charges of Weld Trimmer Machine	Day	0478	300.00
455	Shearing Blade	Each	0479	150.00
456	Hire charges of Mechanical Toe load measuring device	Day	0480	200.00
457	Hire charges of Electronic Toe load measuring device	Day	0481	200.00
458	Rechargeable Battery for ETLMD as per RDSO's Spec. no. TM/SM/ETLMD/218	Each	0482	1000.00
459	Drill twist made of high speed of size 16 mm dia of Addison / I.T. make	Each	0483	895.00
460	Drill twist made of high speed of size 7.2 mm dia of Addison / I.T. make	Each	0484	154.00
461	Drill twist made of high speed steel for size 26.5mm dia of Addison / I T make	Each	0485	1855.00
462	Drill twist made of high speed steel for size 18mm dia of Addison / I T make	Each	0486	957.00
463	Drill twist made of high speed steel for size 28.75 mm dia of Addison / I T make	Each	0487	2109.00
464	Drill twist made of high speed steel for size 31.75 mm dia of Addison / I T make	Each	0488	2808.00
465	Drill Bit (32 mm & 26.5 mm dia)	Each	0489	300.00
466	Cutter (Milling) 32mm dia	Each	0490	1200.00
467	Coolant for milling cutter	Litre	0491	150.00
468	Chiselling Bit	Each	0492	150.00
469	Auger Carpenter	Each	0493	80.00
470	Hire charges of Jib crane attachable and detachable to BFR/BRH	Day	0494	300.00
471	Hire charges of Portal Crane (with Fuel & Driver)	Hour	0495	125.00
472	Hire charges of Insulated Rail Dolly	Day	0496	20.00
473	Hire Charges of Inflatable emergency tower light 400 Watt	Day	0497	50.00
474	Hire charges for OEW flat jack of 100 tons capacity for longitudinal slewing of girder from both sides	Each	0498	2500.00
475	Hand lever box full set BG	Each	0499	11000.00
476	Point lock pin full set BG	Each	0500	720.00
477	Black Oil (used lubricating oil)	Litre	0501	10.00
478	High intensity retro-reflective sheet	sum	0502	1400.00
479	Retro Reflective tape 50mm wide	Metre	0503	85.00
480	Steel wires released from U/S PSC Sleeper	Kg	0504	15.00
481	Bamboo 50 mm dia 2.5 metre long (1 Score = 20 nos.)	score	0505	500.00
482	Bamboo 100 mm dia 2.5 metre long (1 Score = 20 nos.)	score	0506	950.00
483	Hollock Ballies 80mm diameter	Metre	0507	85.00
484	Hollock Ballies 150mm diameter	Metre	0508	150.00

## (Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
485	150 mm dia Eucalyptus Ballies	Metre	0509	143.75
486	125mm dia ballies of locally available wood	Metre	0510	90.00
487	Iron spike (different sizes)	Kg	0511	60.00
488	Nylon rope 5 mm dia	Kg	0512	90.00
489	Weedicide Chemical - Glyphosate	Litre	0513	250.00
490	Halogen Lamps 500 Watt	Nos.	0514	60.00
491	Fluorescent Tube Lights 40 Watt	Nos.	0515	40.00
492	Hard Wood Peg of 50mm dia & 60 cm long	Each	0516	25.00
493	Henkel Loctite Rail safe liquid solution ( 250ml packing ) for tightening of all types of track nuts & bolts to prevent loosening during vibrations	Each	0517	3100.00
494	Poly chloroprene rubber based solvent (toluene free) of Henkel Loctite Track safe or similar make to prevent working out of rubber pads	Kg	0518	2000.00
495	U pin of 6mm dia mild steel of 0.3m length for stone cladding work	Each	0519	14.00
496	Cotton Jute	Kg	0520	40.00
497	Wooden Block (size : 1.0m x 0.3m x 0.15m)	Each	0521	750.00
498	Empty cement bag polythene 50 Kgs capacity	Each	0522	5.00
499	Bitumen drum sheet	Sqm	0523	174.00
500	Sand Paper	Nos.	0524	5.00
501	Helical compression spring 630mm long and 100mm mean dia of helix with 28 numbers for spring coils, conforming to IS 7906(PART-1) -1997 for Height gauge	Each	0525	4000.00
502	Rubber bush for Helical compression spring 100mm mean dia for Height gauge	Each	0526	1850.00
503	Poly propylene tarred rope gabion fabricated from 9mm dia rope 100m x 100m mesh with partition at every 1m interval	Cum	0527	1380.00
504	Precast Concrete bridge No plaque/ stone	Each	0528	287.50
505	Precast Concrete bridge foundation details plaque including engraving complete	Each	0529	402.50
506	Hire charges of boat with boatmen	Day	0530	1200.00
507	Hire charges of 3.0 m x 3.0 m waterproof Tent	Day	0531	50.00
508	Hire charges of Chair	Day	0532	2.50
509	Hire charges of Table	Day	0533	5.00
510	Hire charges of Laptop / Computer with software & Printer	Day	0534	300.00
511	Tracing paper in roll with specification- weight 95gm/m <sup>2</sup> width 914mm and length 45.7m	Each	0535	250.00
512	Ammonia Print Sheet of 55 to 60 GSM, 914mm wide and 10m long	Each	0536	250.00
513	Hire Charges of Total Station instrument	Day	0537	200.00
514	Electricity Charges ( 1 Unit )	KWH	0538	5.00
	<b>Fixed rate elements</b>			

(Rates of the Basic Elements are without GST)

SL	Description	Unit	Rate Code	Rate (Rs)
515	Portland Cement (Rate not to be filled for AOR)	MT	9900	0.00
516	Sundries (no rates reqd.)	Lumpsum	9901	1.00
517	Add for Water Charges @ 1% (no rates reqd.)	Lumpsum	9902	1%
518	Add for GST @ 12% (multiplying factor 0.1405) (no rates reqd.)	Lumpsum	9903	14.05%
519	Add for Contractor's Overheads and Profit @ 15% (no rates reqd.)	Lumpsum	9904	15%
520	Add for Cess @ 1% (no rates reqd.)	Lumpsum	9905	1%
521	Add for working under traffic block @ 5% (no rates reqd.)	Lumpsum	9991	5%
522	Add for working under traffic block @ 10% (no rates reqd.)	Lumpsum	9992	10%
523	Add for working under traffic block @ 15% (no rates reqd.)	Lumpsum	9993	15%
524	Add for working under traffic block @ 20% (no rates reqd.)	Lumpsum	9994	20%
525	Add for working under traffic block @ 25% (no rates reqd.)	Lumpsum	9995	25%