

## **Special conditions of contract. Deep screening of ballast**

### **Scope of work:-**

Deep screening of ballast will include the following works :-

Removing entire stone gauge ballast including muck lying in track between formation top / sand / moorum and under the sleepers and the shoulder. The depth below the bottom of sleepers upto which ballast and the muck should be dug up will be specified by the Engineer – in-charge. This will normally depend on the caked up stone ballast cushion available. Screening the ballast with screens of approved design to separate the clean ballast from muck, putting back clean stone ballast into the track to a height of 15 to 20 cm to form a ballast bed and then laying the new track and picking and disposing of the muck as directed by the engineer – in-charge. The muck be used for cess and slop repairs wherever necessary as directed by the Engineer – in-charge, but should not be dumped on slope of cuttings, or inside drains and catch water drains. Muck will be defined as passing through 30mm sieve.

Adequate number of wooden blocks of size 45 x 25 x 13 cms to support the track for passing rains while the works in progress shall be provided. These works shall be contemplated on the first day for the length taken up for screening. No sleeper will be left unsupported at any stage. Blocks will be supplied by Railway free of cost and will be return to Rly on completion of work.

No ballast should be wasted on the slope of banks or in cuttings. All ballast from the screening should be retrieved and put in the back as directed by the Engineer-in-charge.

### **2.0 RATES**

2.1 The quoted rate for each item of the schedule should be all inclusive, covering all the items described under . “ Scope of work”.

### **3. Speed Restriction :-**

Speed restriction as required for safety of traffic will arranged for by the Engineer-in-charge. No work on the track should be commenced until the Permanent Way Inspector of the Rly has imposed the speed restrictions and erected speed indicators.

After a speed restriction is imposed, the contractor shall progress with the work in a systematic manner. Keeping the following considerations in view. Long length of track under speed restriction should be avoided.

Caution watchman as necessary during day and night will be arranged for by the Railway.

### **4. Safety & Hazards :**

4.1 The work should be executed in a workman like manner to the satisfaction of the Engineer – in-charge. The contractor will be primarily responsible for the safety of traffic that moves on the portion of track under his charge for CTR work / deep screening work and maintenance not withstanding the presence of Railway’s supervisory staff at site.

4.2 In the event of any accident at the works spot, a department enquiry will be held by the Railway. If it is due to any act that amounting to negligences on the part of the contractor, the contractor shall render himself liable for damages and also legal prosecution of loss of life if involved.

5.1 The contractor shall employ the post at site a technical supervisor who should be adequately qualified and wall experienced in execution of Permanent Way Works. The name, particulars of technical qualifications and record of experience of the supervisor employed should be advised to the Engineer – in-charge. If in the opinion of the Engineer – in –charge the supervisor is not fit to be incharge of the work he should be for the replaced. In this matter the opinion of the engineer-in-charge will be final and binding on the contractor.

5.2 No work on the track should be done unless and until the contractor's technical supervisor and Railway's representative is present at site.

6. The contractor will arrange his own tools and equipments to carry out the work.

7. Bonded Labour System (Abolition) Ordinances & 75 would be observed strictly.

8. Site order book and progress report register will be maintained at site. The Railway representative and the contractor's representative must sign on the progress report register daily.

9. The contractor will be responsible for safe passage of all the trains, trains will be allowed on the specific approval of PWI ( R ) in the portion where track is under repairs.

10. The contractor may be required to stop deep screening work during rainfall / summer and no compensation will be paid for this.

11. 30mm sieve (size of the holes) will be used for screening the ballast. Muck will be defined as passing through this sieve.

12. The muck will be thrown sufficiently away from cuttings so that it does not flow down the cutting in monsoon.

13. The contractor shall arrange for the 'Look-out' men to warn the labour of any approaching train.

14. At no time the track under speed restriction should exceed 3 kms. The length of track under speed restriction should follow the pattern shown in Annexure II.

15. The final rail level marked on the cess will be test checked 100% by ADEN before the work is started and after the work is over.

16. The work will commence after ensuring that sufficient quantity of sleepers and rails are unloaded at site so as to achieve a speedy progress and to complete the work within stipulated time as fixed by Engineer-in-charge.

17. The contractor will have to do deep screening / TSR for the entire length of the track as mentioned in the schedule. The rates quoted by the contractors are inclusive of all special stretches of track in that length e.g. LWR or SWR, on curves or gradient on banks or cuttings. No extra payment will be made to the contractor on any account and all the work incidental to deep screening / TSR will be done by contractor with his labour and tools. Re-alignment of curves is also included in the rates of deep screening.

18. Relevant provision of codes, manuals, circulars, etc. shall be observed by the contractor at all times.

19. After the work is over, the ballast section, cess and side drains will conform to the drawings as shown in annexure II and the track parameters will confirm to standards given in Annexure I..

**Note:-**

1. The work will be carried out strictly as per the IRPWM.

2. The work of lifting and through backing shall be so carried out that the longitudinal section at the completion of the final round of through packing confirms to the / markings which will be provided by the PWI to the contractor at the commencement of the work and also at places there are sags and humps. Contractor will have to provide 30 cm cushion by deep screening / or lifting, payment will be made only for them No. 21312 . No additional payment or lifting / elimination of sags & humps is admissible. Contractor should visit the site and quote his rates accordingly.

3. Quantities of above items are likely to vary. The contractor will have no claims due to variation, declaration of any items.
4. The contractor has to deploy sufficient labour to carry out the work round the clock if needed by the Rly Administration.
5. The contractor has to make his own arrangements, of tools, lifting, generator, drinking water and temporary shelter, sheds for his labour at his own cost.
6. The contractor has to produce licence of labour engagement issued by LEO of the area concerned. The contractor has to follow the labour rules framed by LEO.

#### **Special conditions**

1. The final rail level marked on cess / ETP should be maintained by the contractor and the same will be checked after the work is completed and speed relaxed to normal. Any correction required in the final rail level will be done by the contractor at his cost.
2. The adequate number of wooden blocks to support the track for passing train while Deep screening work is in progress will be provided by the Rly free of cost and the contractor will return the same on completion of work. Any loss to these will be recovered from contractor.
3. Regarding schedule item of deep screening if the contractor has not disposed the muck away from track as directed by the Engineer –in-charge including cutting or making upto the cess and ensuring the proper drainage, 20% of payment will be deducted and will be paid after the said work is done by the contractor.

#### **Lifting of track** **Special conditions of contract**

#### **Scope of work :-**

- a) At a time 75mm should not more than 50mm be lifted and it should be as per M.W. Manual.
- b) Proper Ramp should be provided for passage of train as per M.W. Manual.
- c) Aligning and leveling the track and rought packing underneath with the ballast adequately so as to maintain at 15 kmph.

These works shall be completed on the first day, for the length taken up for lifting.

- 1.2 “Boxing of ballast” will include the following items of works.

The ballast should be boxed and consolidated proper template should be used for ballast profile. The width at the shoulders should be directed by the Engineering-in-charge which will normally not less than 3.51 M and not more than 3.81 M.

#### **2.0 RATES**

- 2.1 The quoted rate for each item of the schedule should be all inclusive, covering all the items described under “Scope of work”.

#### **3. SPEED RESTRICTIONS.**

Speed restrictions as required for safety of traffic will be arranged for by the Engineer-in-charges. No work on the track should be commenced until the Permanent Way Inspector of the Railways has imposed the speed restrictions and erected speed indicators.

After a speed restriction is imposed, the contractor shall progress with the work in a systematic manner, keeping the following considerations in view, long length of tracks under speed restriction should be avoided.

Caution watchman as necessary during day and night should be arranged for, by the Railway.

#### 4.0 SAFETY HAZARDS

4.1 The work should be executed in a workmanlike manner to be satisfactory of the Engineer-in-charge. The contractor will be primarily responsible for the safety of traffic that moves on the portion of track under his charge for lifting and maintenance notwithstanding the presence of Railway's supervisory staff at site.

4.2 In the event of any accident at the works spot, the departmental enquiry will be held by the Railway. If initially established that the accident occurred wholly or partially due to any act amounting to negligence on the part of the contractor, he shall be liable for all damages and also legal prosecution if loss of life is involved.

#### 5. Contractors supervisory personnel

The contractor shall employ and post at site technical supervisor who should be adequately qualified and well experienced in execution of Permanent Way Works. The particulars of technical qualifications and record of experience of the supervisor employed should be advised to the Engineer-in-charge. If the opinion of the Engineer-in-charge is that the supervisor is not fit to be in charge of the works, he should be forthwith replaced. In this matter the opinion of the Engineer-in-charge will be final and binding on the contractors.

5.2 Not work on the track should be done unless and until the contractor's technical supervisor and Railway's representative is present at site.

#### SPECIAL CONDITIONS OF CONTRACT FOR TRACK

1. The contract shall be governed by General condition of contract and standard specifications laid down in the paras of Indian Railway's P.Way Manual. In cases of ambiguity regarding interpretation of words, the meaning contained in manual and codes will prevail.
2. Bonded labour system (Abolition) & 75 would be observed strictly.
2. The contractor shall arrange for "Lookout man" in addition to Rly's arrangements for protection to warn the contractor's labourers of any approaching train. No compensation will be paid by Railways in case of any injury or death to contractor's labour and the contractor shall indemnify the railways of any responsibility in regard to his supervisors and labours.
3. For executing the work, the contractor has to arrange his own tools and equipments unless otherwise stated in the item. Railway may provide specialised equipment which are specifically mentioned in the description of item.
4. In all cases the work shall be carried out under supervision of competent Railway Official. Protection of running lines and erection of speed restriction boards would be arranged by Railway. Under no circumstances the contractor shall commence work on running lines without Rly's official permission and presence at site.
5. (i) If any unsafe working is resorted to by contractor, Rly supervisor would be free to stop further work and contractor will have no claim for compensation due to stoppage of unsafe working.  
  
ii) In case, there is delay or any defects in carrying out any operation by contractor, Railway supervisor would be to deploy Railway labour if required and suitable recovery shall be from contractor's bills equivalent to departmental cost. The same condition will

- be applicable if the contractor's labour leaves the job unfinished and it is considered necessary to attend the job by railway's labour in the interest of safety.
6. The contractor should engage the required number of qualified and experienced staff who is well conversant with track relaying works. The contractor shall employ and post at site technical supervisors in sufficient numbers who should be adequately qualified and well experienced in execution of P.Way works. The technical supervisor so engage by the contractor shall have to pass required medical examination and also safety tests. The name particulars of technical qualification and record of experience of the supervisor employed, should be advised to the Engineer in charge.
  7. The contractor will arrange for safe custody or supplied to him and arrange for posting of necessary watchman as required. In case of any loss of material the Railway's entitled to recover the cost as the rates of original purchase rate / market rate whichever is higher plus equal charges.
  8. No compensation shall be payable to the contractor if the work cannot be done due to non availability of traffic block, sudden rains or any other reason whatsoever. The contractor shall take into account the probability of labour utilization depending on the traffic density of the section and quote his rate accordingly.
  9. Site order books, progress report register and material issue register shall be maintained at site and entitles will be recorded on day to day basis in the registers and signed jointly by Railways Supervisor and contractor or his authorized representative. All details of handing and taking over sections for different stages of packing, imposition and removal of speed restrictions, measurement of truck parameters, accountal of released material etc. should be recorded.
  10. In case of loading / unloading from railway wagons all commercial formalities shall be observed. All demurrage / whatfage charges accruing due to neglect of contractor will be recovered from outstanding bills of contractors.
  11. In case trains are detained at the approach of workspot, due to their passage being considered unsafe by Rlys supervisor due to bad workmanship of contractor's labour or track parameters not being satisfactory to ensure safe passage of trains or due to abandoning the site leaving the work unfinished, the railway shall be entitled to recover detention charges from contractor's bills / SD at the following rate :-  
 In case of trains carrying passengers : Rs. 5000/- per hour  
 In case of trains carrying good wagons – Rs. 4000/- per hour  
 In case of light / power / departmental trains – Rs. 1000/- per hour.
- These charges will be in addition to recoveries specified in para 6.(ii).
12. The contractor will be required to stop deep screening during rainfall and no compensation will be made for this.
  13. 10mm sieve (size of the holes) will be used for screening the ballast. Muck will be defined as material passing through this sieves.
  14. No ballast will be wasted on the slopes of banks or in cuttings. All ballast from the slopes shall be picked up and put in the track as directed by Engineer. This muck will be thrown sufficiently away from cutting so that it does not flow down the cutting in monsoon.
  15. The contractor must give a minimum progress of 5000 meters of deep screening / TSR / per month measuring in track length.
  16. On a contract of needing imposition of speed restriction the contractor shall have a minimum of 400 labour should be working at site, to ensure productive use of the traffic time.
  17. Contractor should have group insurance for all the labour engaged at site for a minimum of Rs. One lakh each
  18. Contractor will also indemnity for the loss due to train accident at site to an amount of loss incurred by the Railway, if the accident is due to the negligence of the contractor.

## **ACCOUNTAL OF RELEASED MATERIAL**

Before handing over the site of work to the contractor the joint inventory of the material to be released from the site shall be taken jointly by Engineer's representative on behalf of Railway and contractor and this inventory should be jointly signed in triplicate and two copies of which shall be retained the Railway and one by the contractor.

The payment of running bills of the contractor shall be subject to his collection, lifting, transportation, sorting stacking and accountal of the released material at site nominated by the Engineer's representative and to his satisfaction for further disposal of the same by the Railway Administration.

At the time of making of the final bill, the released material should again be tallied with the joint inventory already made and payment of final bill will be subject to proper accountal of released materials as per this inventory. The contractor shall be responsible for any shortfall in the released material and is recoverable from his considering the same as loss to the Railway Administration.

### **Technical Supervision**

The tenderer / contractor shall employ adequate number of technical supervisors at each work site to the satisfaction of the Engineer and the supervisors will be given necessary counseling by the Engineer's representative on behalf of the Railway Administration in regard to safety in execution of track contract works.

The acts of omission and commission by those supervisors shall be the omission and commission of the contractor.

The contractor shall intimate names of his tech. Supervisors to the Engineer of Rly before starting work and their deployment will be subject to his approval and counseling by the Railway in safety matters.

### **Track geometry standards during deep screening**

- |    |                     |  |
|----|---------------------|--|
| a) | Gauge               | On straight<br>On curves 0 to $\pm 6\text{mm}$<br>( These are with reference to nominal gauge of 1676)<br>Sleepers to sleeper variation not more than 2 mm   |
| b) | Joints              | Low or high joints not permitted.  |
| c) | Spacing of sleepers | With respect to theoretical $\pm 20\text{mm}$ spacing  |
| d) | Gross levels        | To be recorded at every $\pm 3\text{mm}$ for<br>3.0 interval theoretical.<br><br>Sleepers to sleepers variation not to exceed 1mm  |
| e) | Alignment           | i) On straight on 14.4 M chord $\pm 3\text{mm}$<br><br>ii) On curves of radius more than 600mm<br><br>On 20mm chord variation over 5mm theoretical versines<br><br>iii) On curves of radius less than 600mm<br><br>On 20mm chord variation over theoretical versines 10mm. |
| f) | Longitudinal levels | Variation in longitudinal with reference to approval<br>longitudinal section $\pm 40\text{mm}$ .   |

**PROPOSED SCHEDULE FOR DEEP SCREENING (MANUAL PACKING )**

Details of work	Day of work	Speed restriction and their length board gauge
Deep screening and initial packing	1	20 kmph
First through packing	2	
Second through packing	3	
Picking up slacks as required	4	45 kmph
	5	
	6	
	7	
	8	
Third through packing	9	
	10	
Picking up slacks as required	11	75 kmph
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
Fourth through packing	20	
	21	
	21 onwards	Normal sectional speed.

.....