DO’s AND DON’Ts
ON
RE-ALIGNMENT OF CURVE

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INDIAN RAILWAYS CENTRE FOR ADVANCED MAINTENANCE TECHNOLOGY,
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PREFACE

The increased growth of freight and passenger traffic at high speed railway track is resulted in more intensive maintenance and utilization of existing track maintenance practices and machines with special emphasis to proper upkeep and maintenance of curves.

This booklet has been prepared for JE(Track) who is making all arrangements for proper upkeep and maintenance of curve. Booklet may be used as a ready reckoner while doing realignment of curves.
This booklet does not supercede any existing instructions from Railway Board, IRPWM, RDSO etc.

I am grateful for the assistance given to me by Shri Sunil Gupta, CTA (civil) who prepared the matter in simple form and done hindi translation. Nice data entry done by Kum. Sangeeta Sinha, DEO.

I would also welcome any suggestion for addition and improvements.

Date : 31.08.98        R.S.Dubey
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RE-ALIGNMENT OF CURVE
( By Manual Method)

DO’s

1. Do the careful recording of versine before realignment.

2. Do the foot to foot survey before realignment.

3. Do the replacement of missing and uneffective fittings.

4. Do fulfill the deficient ballast in the track.

5. Do the marking of stations 10M apart on the running rail.
6. Do provide the centre line pegs through out the curve.

7. Do write the quantity of calculated slew with arrow marking on sleepers before realignment.

8. Do mark the cant reading on the running rail.

9. Do replace the defective sleepers and rails before realignment.

10. Do note the obligatory points (like level crossing, Bridges, platforms, signal post etc) while recording of versines.
DON’Ts

1. Do not realign the curve when 6 joints are jammed in SWR.

2. Do not realign the curve on LWR/ CWR section when temperature is exceeding $t_d + 20$ or likely to be exceeding after realignment within 24 hrs.

3. Do not infringe the standard dimensions during realignment of curve (i.e. centre to centre on double line, fix structure near the track).

4. Do not realign the curve until necessary speed restriction is imposed.
5. Do not lift the track during realignment.
By Mechanised Method

A. (Before taking up tamping work)

DOs

1. Do provide ballast where there is shortage of ballast.

2. Do provide Heaping up of ballast in the tamping zone to ensure effective packing.

3. Do cleaning of pumping joints and provide additional clean ballast where necessary.

4. Do attend Hogged joints before tamping.
5. Do tightening of all fittings and fastenings like fish bolts, keys, splitting of cotters and replacement of worn out fittings.

6. Do squaring of sleepers and proper spacing/adjustment; regrading of track to be done as necessary.

7. Do adjustment of creep and expansion gaps in rails.

8. Do examination of rails for cracks etc.

9. Do clearing of ballast of sleepers to make them visible to the operator.

Do’s and Don’ts on realignment of curve June’98
10. Do the survey of every Vth sleeper to calculate required slew/ lift and these values shall be painted on pegs and also shall be given to machine operator so that he can take precautions/ necessary action during tamping work.

11. Do provide proper drainage of water as and when required.

**DON’Ts**

1. Dont provide high cess, make it proper cess.

2. Dont do tamping if sleepers are broken/ damaged.

**B. (Work to be Done During Tamping)**

**DO**

Do’s and Don’ts on realignment of curve June’98
1. Do clear all obstructions such as signal rods, cables, pipes, level crossings, guard rails, etc. likely to be damaged by the tampers should be clearly marked and made known to the tamping operator before he starts work.

2. Do adjustment of depth tamping tools depending upon the type of sleepers, keeping about 10mm gap between the upper edge of the blade of tamping tool and lower edge of sleeper in close position of the tamping tools.

3. Do adjustment of squeezing pressure depending upon general track structure,
particularly the type of sleepers and condition of ballast.

4. Do provide general lift to the track which is normally 5 to 20 mm should be given depending upon the site condition.

5. Do compaction of shoulders along with tamping where separate provision for shoulder compaction is available.

6. Do provide a run in and run out ramp of about 1 in 1000 (i.e. about 10 to 12 mm per rail) so that required lift may be attained.

**DON’Ts**

Do’s and Don’ts on realignment of curve     June’98
1. Don't do tamping in CST-9 and steel trough sleepers, unless keys are made tight and properly driven.

C. (Work to be done just after tamping)

**DO's**

1. **Ballast**: The ballast must be spread and levelled to proper profile. The shoulders and cribs should be rammed for giving better retention to packing.

2. **Joints**: Fish plates must be checked and tightened, if necessary.

3. **Fastenings**: All fastenings must be checked and tightened, wherever necessary. Broken fastening should be replaced.
4. **Track Parameters**: The track parameters should be measured.

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OUR OBJECTIVE

To upgrade Maintenance Technologies and Methodologies and achieve improvement in productivity and performance of all Railway assets and manpower which inter-alia would cover Reliability, Availability, and Utilisation

If you have any suggestion & any specific comments, please write to us:

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