

S&C – Stone blowing – Hand Held

Scope Includes: Manual held mechanical consolidation, local repair of vertical and cross-level geometry

Preparation

Tools, equipment and plant items required but not limited to:

- Hydraulic lift jacks
- Shovels/forks
- Sighting boards
- Calibrated cross-level gauges
- Approved rail thermometer
- Portable compressor
- Stoneblowing lance
- Detachable blowing nozzles
- Chipping canister
- Chipping hopper

Work planning considerations:

- Technical survey/design requirements
- Signalling requirements
- Traction requirements
- Additional "Over-lift" is not to be undertaken
- Direction of working/sighting
- Evidence of voiding
- Technical survey/design to be undertaken
- Weather considerations
- Materials
- Changes to CRT

Method

1. Ensure rail temperature is within safe working limits.
2. Ensure rail fastenings are correctly installed.
3. Lifting of track should normally be undertaken in the direction of traffic (from sighting board to target board).
4. Identify datum rail.
5. Identify datum rail high spots by visual means on the through line first.
6. Place sighting board and target board on selected datum rail high spots which needs track lift between.
7. Place intermediate board on the datum rail between the sighting and target boards, starting 4 sleepers, timbers or bearers in from the target board.
8. Open out ballast and insert a jack under the low rail foot in the bay nearest the intermediate board. In S&C jacks should be no more than 2 bearers apart

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9. Lift the rail using jacks until the required line of sight is achieved between the sighting, target and intermediate boards.
10. Open out the ballast bay on the 4' side of the rail to expose the underside of the sleeper/timber/bearer (only open out one side of the sleeper to the width of one shovel from the rail).
11. Inject chippings under the sleeper (from the prepared bay) until rejection of chippings is observed.
12. Check cross-level.
13. Lift the adjacent rail until the correct cross level is achieved.
14. Carry out steps 8 to 11 for the adjacent rail.
15. Remove jacks.
16. Ensure cross level is correct.
17. Box-in opened out bay.
18. Ensure the intermediate sleepers are similarly stone blown.
19. This operation is repeated as the intermediate board is moved (towards the target board) and sightings taken at 4-sleeper intervals.
20. The intermediate board is moved on when stone blowing has been completed on the nearest sleeper.
21. Ensure track geometry is correct on completion of stoneblowing on the through line.
22. Carry out hand held stone blowing on the crossover/turnout line.
23. Check cross levels at every through timber/bearer.
24. Stone blowing must be undertaken at every through timber/bearer under both rails using the previously described method even if no cross-level correction is required.
25. On completion of stone blowing ensure track geometry is correct through out the lay out.
26. Reinstate correct ballast profile.
27. Ensure signalling staff check the operation of signalling equipment that may have been affected by this work.