

SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF CIVIL ENGINEERING **&**

CIVIL ENGINEERING PLANNING

19CET 205 –HIGHWAY AND RAILWAY ENGINEERING

II YEAR– IV SEM

UNIT- IV - RAILWAY ENGINEERING - BASICS AND COMPONENTS

TOPIC 6 : SLEEPERS- FUNCTIONS







SLEEPERS- FUNCTIONS

DOUBLE HEADED RAILS

- ❖ Sleepers are members generally laid transverse to the rails, on which the rails are supported & fixed, to transfer the loads from the rails to the ballast and the sub grade.



SLEEPERS- FUNCTIONS

- ❖ Holding rails to correct gauge and alignment.
- ❖ Firm and even support to rails.
- ❖ Transferring the load evenly from rails to wider area of ballast.
- ❖ Elastic medium between rails and ballast.
- ❖ Providing longitudinal and lateral stability



SLEEPERS - REQUIREMENTS

- ❖ The sleepers to be used should be economical, i.e they should have minimum possible initial & maintenance cost.
- ❖ Moderate weight – easy to handle.
- ❖ Fixing & removing of fastenings should be easy.
- ❖ Sufficient bearing area.
- ❖ Easy maintenance & gauge adjustment.
- ❖ Track circuiting (electric insulation) must be possible.
- ❖ Able to resist shocks & vibrations.



SLEEPERS- FUNCTIONS





SLEEPERS- FUNCTIONS





References



- <https://nptel.ac.in/courses/105/101/105101006/>
- <https://nptel.ac.in/courses/105/106/105106151/>

Thank You