



# **SNS COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution)**

**COIMBATORE-35.**



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

## **DEPARTMENT OF AUTOMOBILE ENGINEERING**

### **COURSE NAME : 19AUE308 - SPECIAL VEHICLES**

**III YEAR /VI SEMESTER**

**Unit 2- Constructional Vehicles**

**Topic 8 : Pile Driver**



# CONTENT



- Introduction
- Need for Ramming Machine
- Components
- Construction & Working
- Advantages & Disadvantages
- Applications
- Manufacturing Companies



# INTRODUCTION



- Ramming machine is used for laying deep foundation for construction of bridges and big buildings.
- In ramming machine, the foundation pillar is fixed to the required destination.
- Then it is hammered to the ground surface with the help of hydraulic mechanism.





# NEED FOR RAMMING MACHINE



- Large bridges requires a deep foundation.
- Laying deep foundation with the aid of man power is impossible.
- For serving this purpose, the Ramming Machine is used.

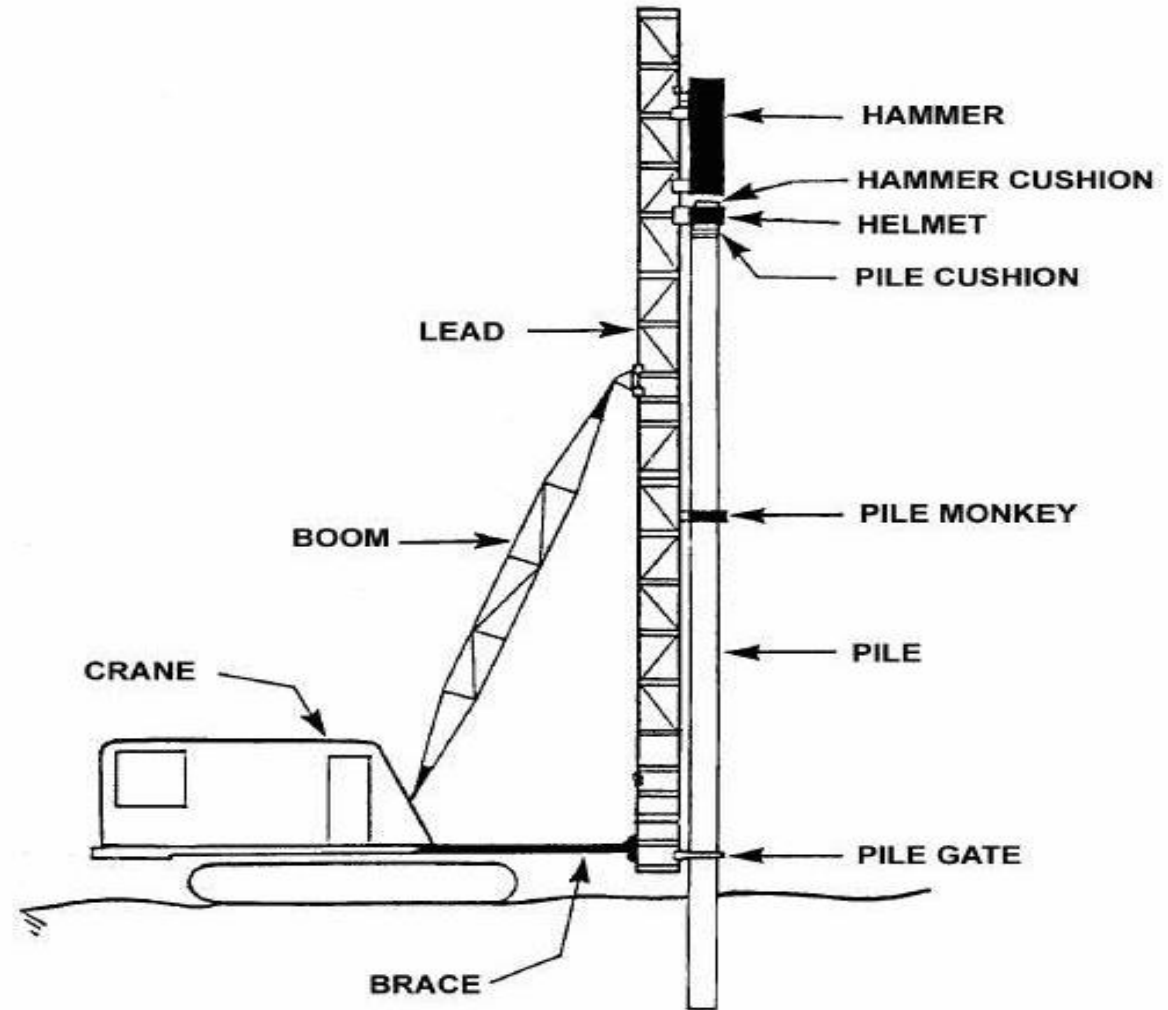


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# COMPONENTS

- Crane
- Boom
- Lead
- Brace
- Hammer
- Hammer cushion
- Pile cushion
- Pile gate





# CONSTRUCTION

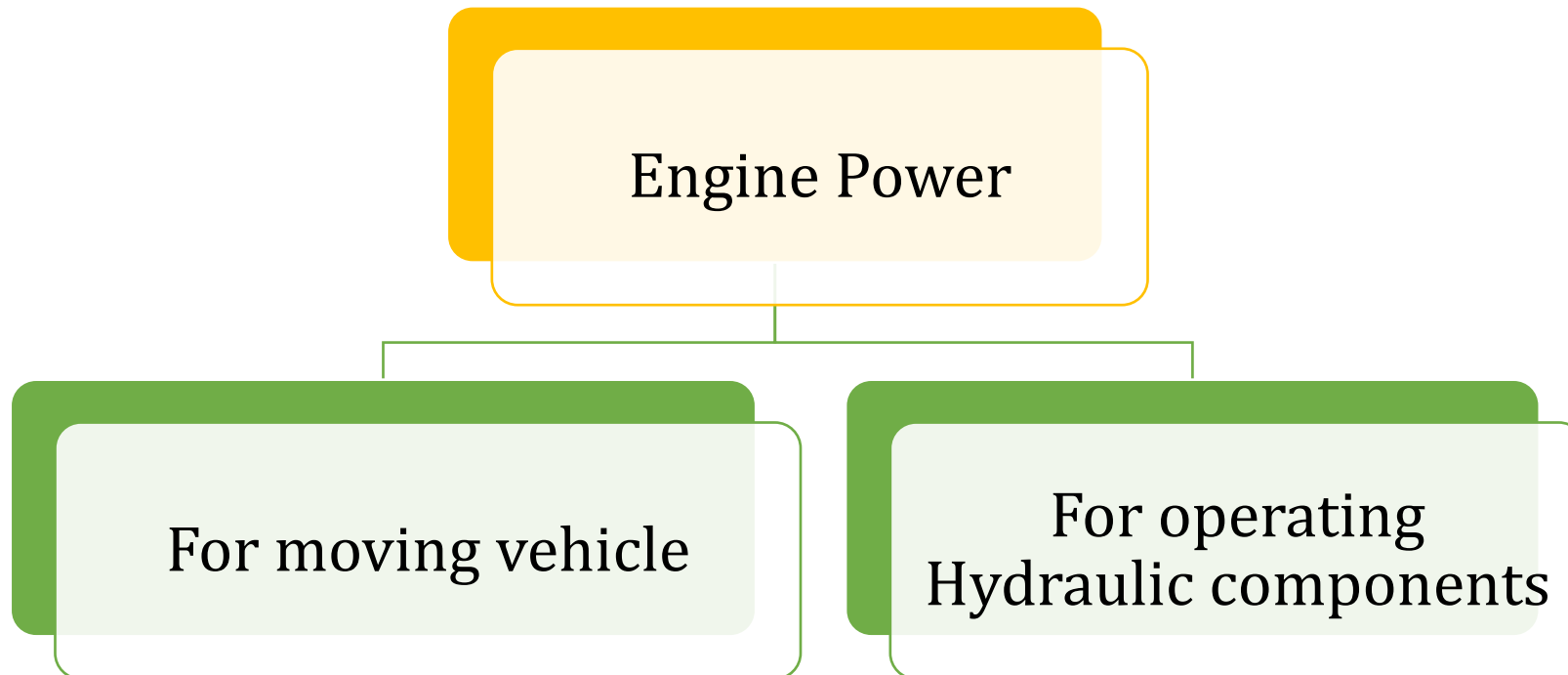


- A hydraulic motor enables the slewing platform to rotate full 360°.
- It consist of the mast in which the hammer assembly is fixed.
- The rope assembly is used for lifting the load.
- The hammer assembly is provided to hammer the load inside the earth surface.





# WORKING





# WORKING



- With the help of rope assembly, the load is raised vertically and fixed in the slot.
- The hammer hits the load toward the ground.
- The controlling of the hydraulic system is done by the use of valve control lever.



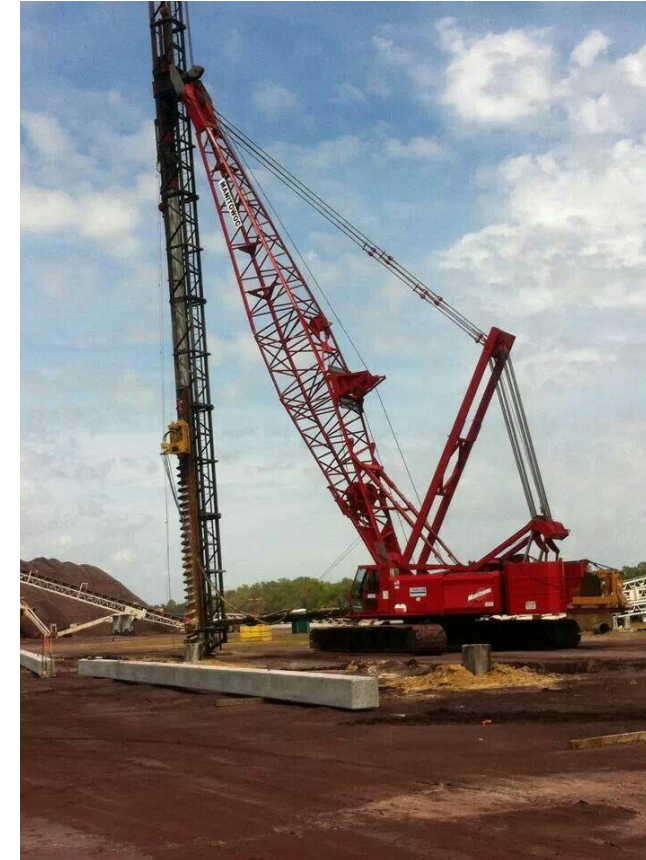




# ADVANTAGES



- Building Foundation is made easily
- Reduces man power
- More efficient work than manual process
- Less operating time





# DISADVANTAGES



- High Capital cost
- High operating cost
- Requires Skill driver





# APPLICATION



- Used in construction of Bridges for foundation purpose
- Used in construction site.





# MANUFACTURING COMPANIES



- Toscopali
- Sinomada Heavy Industry
- Rancheng
- Maxizm Construction Machinery





1. What are the components of Ramming Machine?
2. What is the application of Ramming Machine?
3. What is the cost of Ramming Machine?

ASSESSMENT





## REFERENCE



- ❖ [https://en.wikipedia.org/wiki/Pile\\_driver](https://en.wikipedia.org/wiki/Pile_driver)
- ❖ <https://www.youtube.com/watch?v=aHE-sFfvK04>



THANK YOU !!!