



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35.



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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 2 : Jip Cranes



CONTENT



- Introduction
- Need for Jip crane
- Components
- Construction & Working
- Advantages & Disadvantages
- Applications
- Manufacturing Companies



INTRODUCTION



- A crane is a type of machine, generally equipped with a hoist rope, wire ropes or chains, and sheaves.
- It can be used both to lift and lower materials and to move them horizontally.
- It is mainly used for lifting heavy things and transporting them to other places.

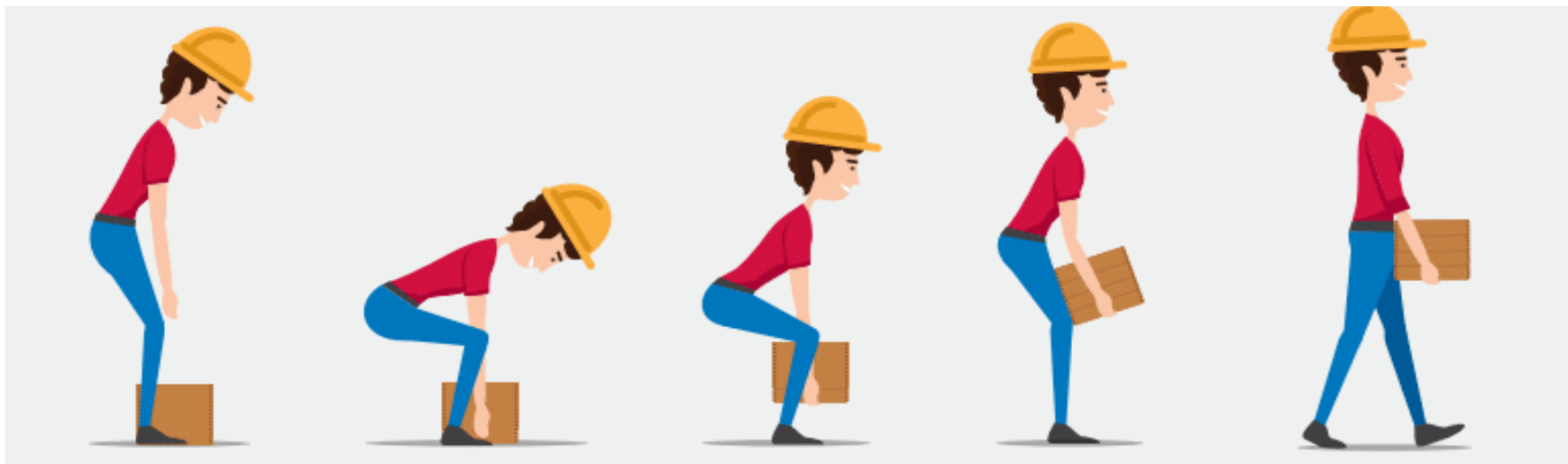




NEED FOR JIP CRANES



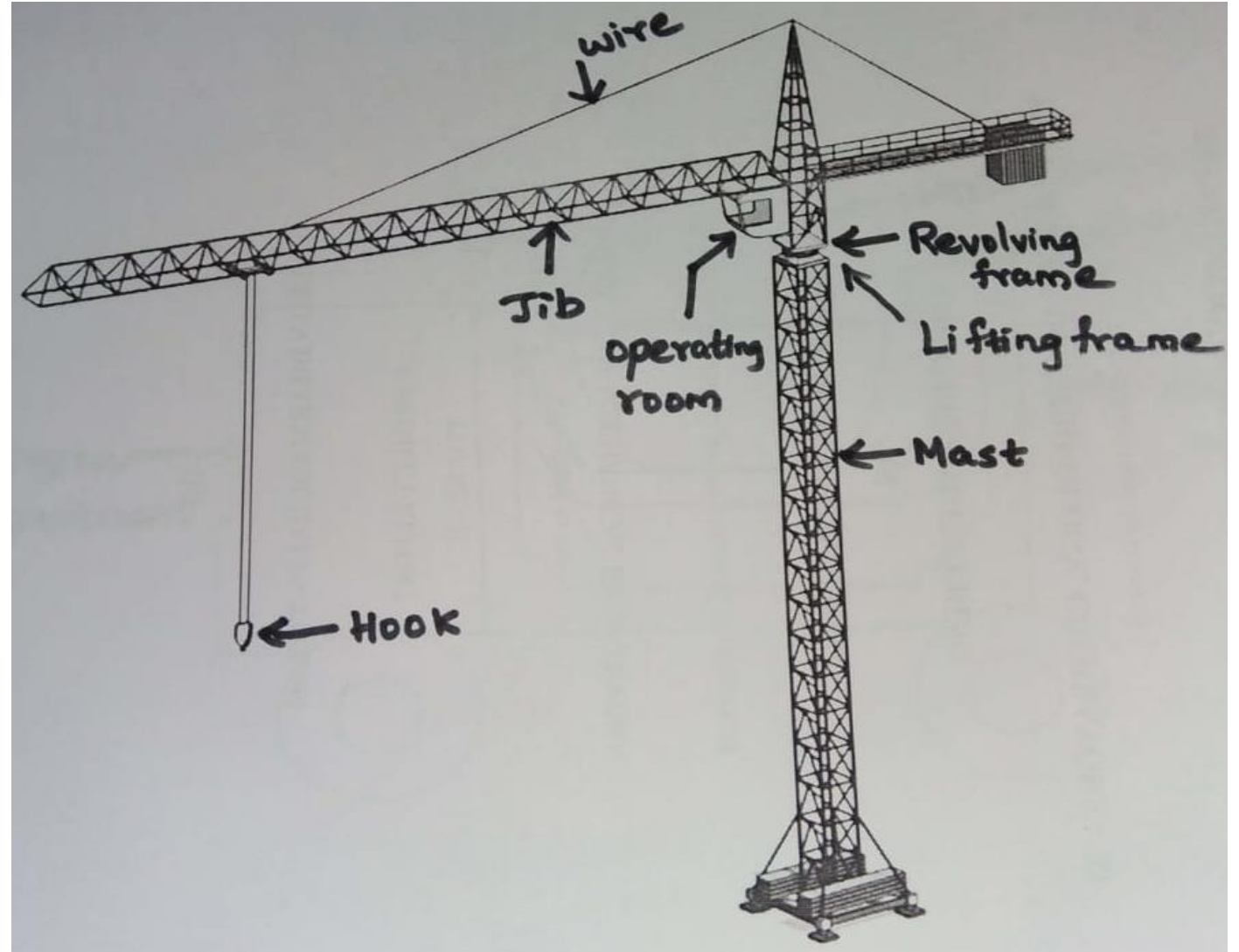
- The construction of big building require more products to be transmitted from ground floor to top floor, including the workers.
- It is impossible to move all the construction materials with the aid of man power.
- Time taken for the process will be more in manual process.
- For overcoming this, the Jip cranes is used in constructional sites.





COMPONENTS

- Revolving frame
- Lifting frame
- Mast
- Wire
- Operating room
- Electric motor
- Jib
- Hook





CONSTRUCTION



- Mast is the main supporting tower of the crane.
- Slewing unit sits at the top of the mast.
- On most tower cranes the operating cabin sits just above the slewing unit.
- The jib, or operating arm, extends horizontally from the crane.





CONSTRUCTION



- The hoist winch assembly consists of the hoist winch, the hoist motor controller and supporting components such as the platform.
- The hook is used to connect the material to the crane.
- Large concrete counterweights are mounted toward the rear of the counter deck, to compensate for the weight of the goods lifted.

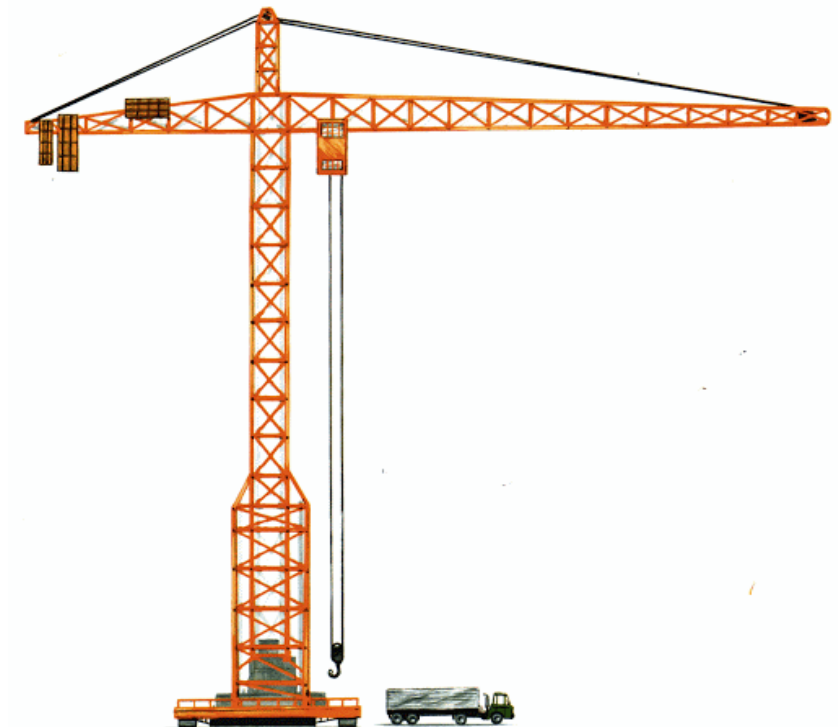




WORKING



- The hook is moved down to the place where the material needed to be lifted.
- Then the hook is connected to the material that needed to be lift.
- Then the material is lifted up with the help of rope mechanism, then the material is moved to the required destination.





ADVANTAGES



- Reduces human effort.
- Less operating time.
- Increases working efficiency.





DISADVANTAGES

- High Capital cost.
- High Operating cost.
- Carrying more load can cause accident.
- Requires skill operator.





APPLICATION

- Used in Big constructions like Shopping mall, Apartment, Big Companies.
- Used for transporting the goods with in the construction site.
- Used in Bridge constructions.





MANUFACTURING COMPANIES



- ❖ Wolffkran
- ❖ Yongmao
- ❖ Raimondi
- ❖ Zoom Lion

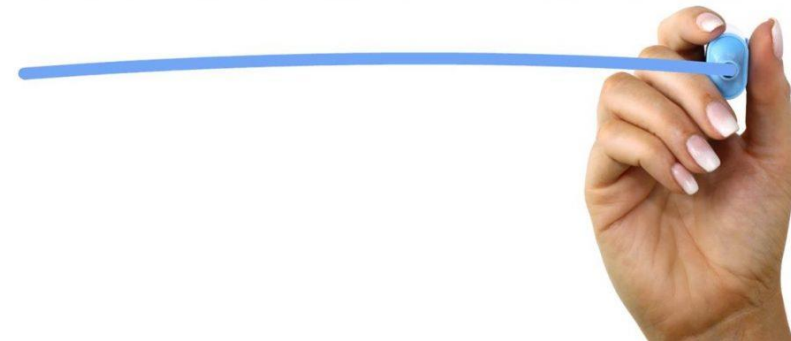
ZOOMLION

WOLFFKRAN



1. Mention the use of counterweight in Jip crane.
2. Mention the name of the vertical beam in Jip crane.
3. What is the cost of Jip Crane?

ASSESSMENT

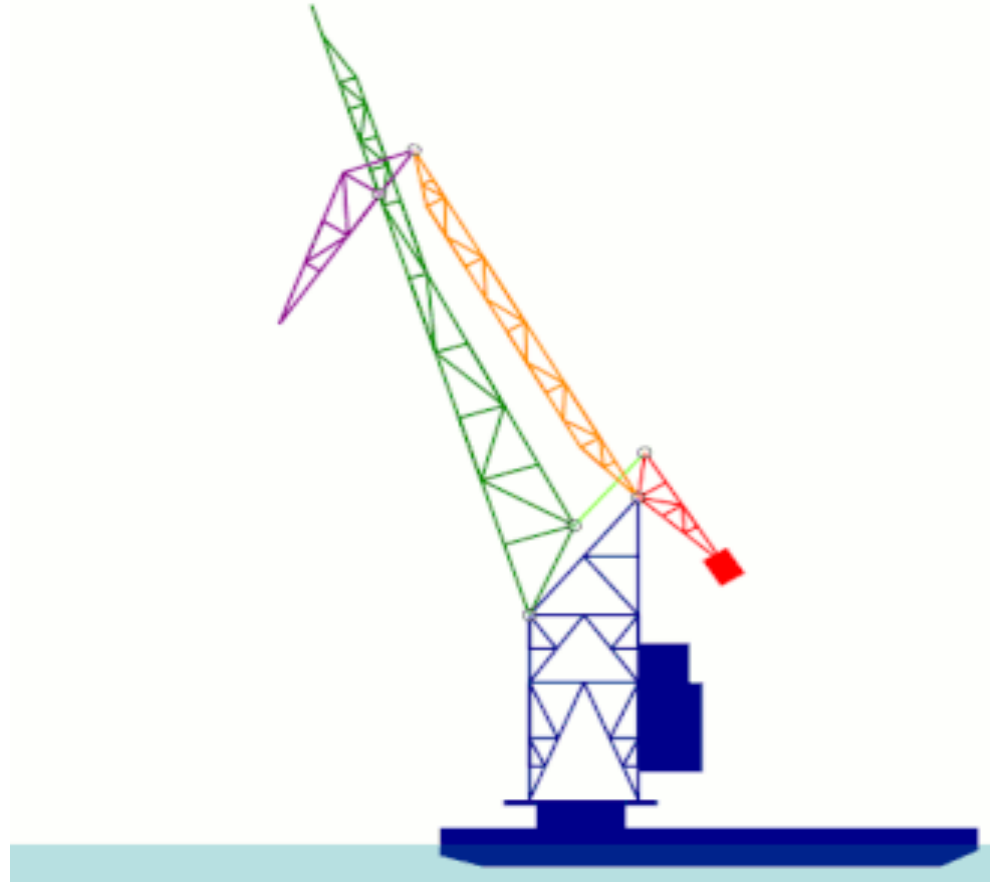




REFERENCE



- [https://en.wikipedia.org/wiki/Jib_\(crane\)](https://en.wikipedia.org/wiki/Jib_(crane))
- <https://www.youtube.com/watch?v=aqHHQNV7QBQ>



THANK YOU !!!