DIGITAL FABRICATION

Group 25

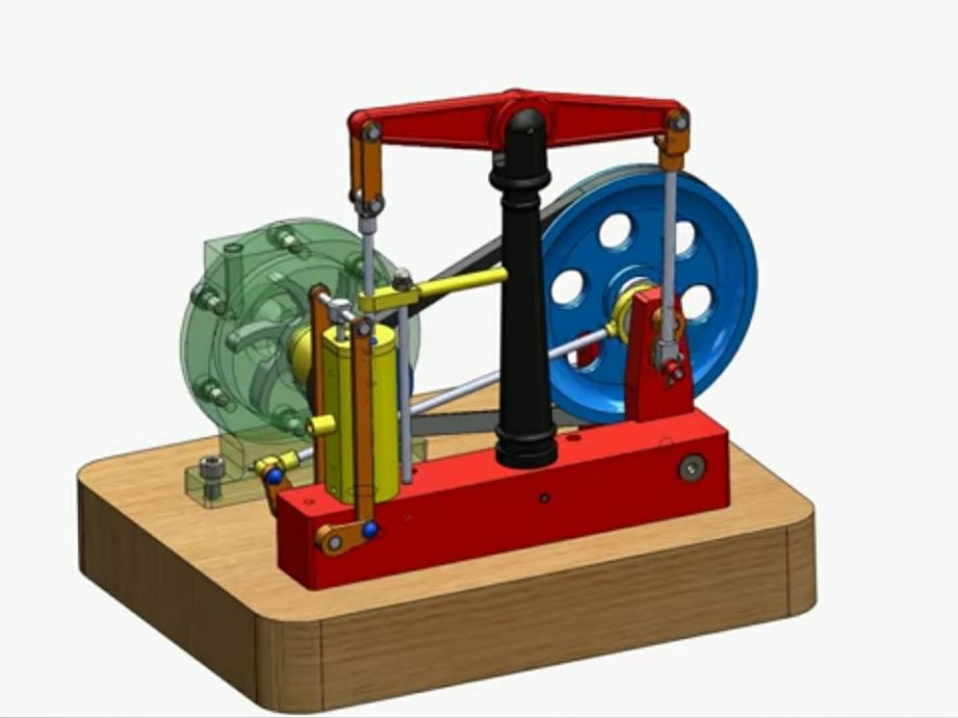
- STEAM ENGINE

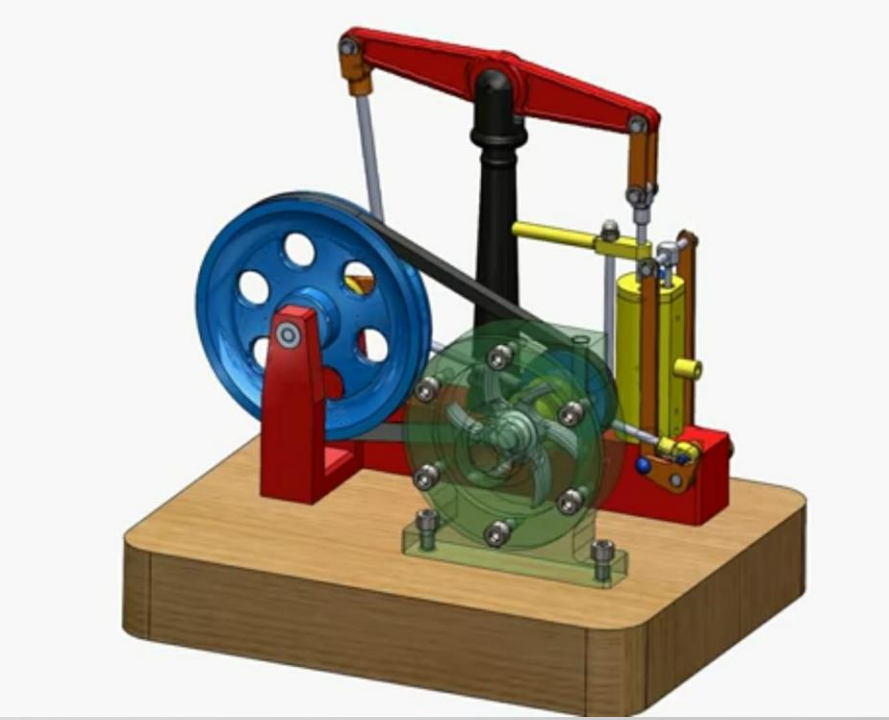
- Madala Jaswanth Chowdary -EE20BTECH11025
- Tejasree Gunturu -EE20BTECH11049
- Bokka Raja Ravi Kiran Reddy -CS20BTECH11009
- Javaji Manoj Bhargav -CS20BTECH11022
- Saketh Vaddamani -CS20BTECH11054

ABOUT STEAM ENGINE

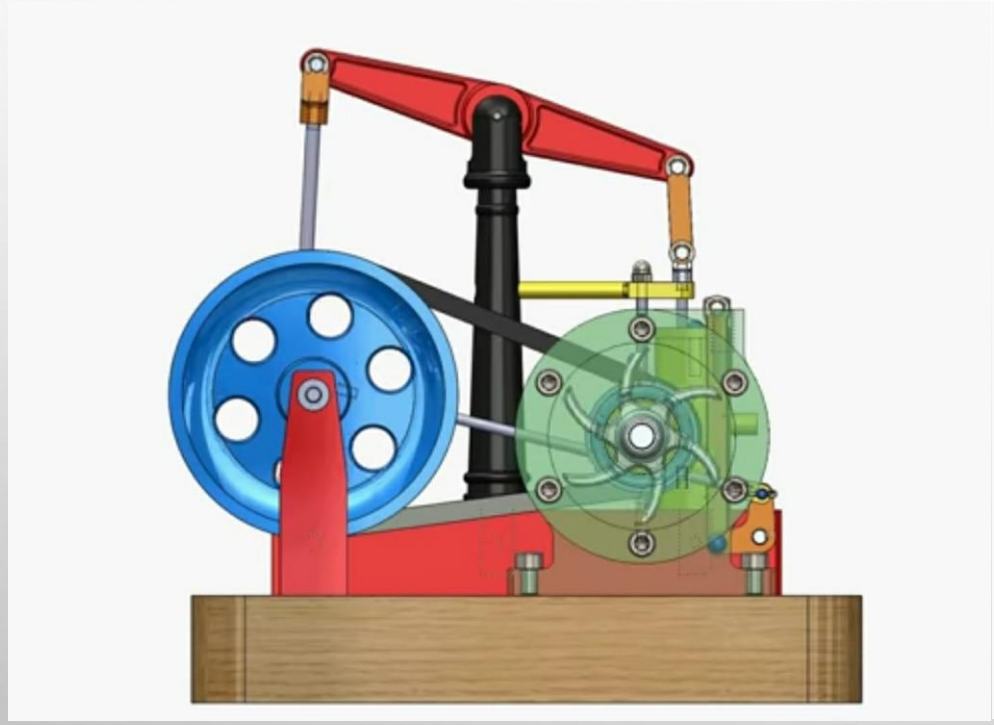
- WE GOT THE IDEA FROM THE THOUGHT OF THE FIRST ENGINE MADE, THE STEAM ENGINE.
- IT'S WORKING MODEL AMAZED US AND WE WANT TO SHOW THAT IN OUR PROJECT.
- THE MODEL WE CREATED HAS A LOT OF COMPLEX PARTS WHICH REALLY CHALLENGES OUR 3D MODELLING SKILLS.
- GETTING EVERY SMALL DETAIL ACCURATE WITH MEASUREMENTS IS THE REAL COMPLEXITY IN THIS DESIGN.
- A STEAM ENGINE IS A HEAT ENGINE THAT PERFORMS MECHANICAL WORK USING STEAM AS ITS WORKING FLUID.
- THIS PROJECT IS A STEAM-POWERED CYLINDER ATTACHED TO A WATER PUMP WITH A PULLEY AND BEAM APPARATUS. THE HORIZONTAL BEAM ALLOWS THE TRANSFER OF POWER FROM THE CYLINDER TO THE PULLEY, WHICH ROTATES AN ECCENTRIC HUB. THIS OPERATES A VALVE ON THE CYLINDER THAT LETS STEAM TO PASS IN AND OUT OF IT.

STEAM ENGINE





STEAM ENGINE



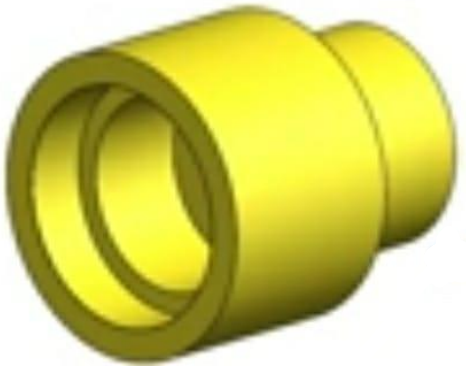
❑ CONTRIBUTION

MADALA JASWANTH CHOWDARY

- Centrifugal pump bearing
- Centrifugal Pump Cover
- Centrifugal pump pulley
- Centrifugal pump Housing
- Centrifugal pump impeller
- Centrifugal pump shaft
- Screws
- Assembly



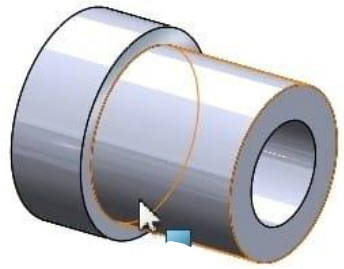
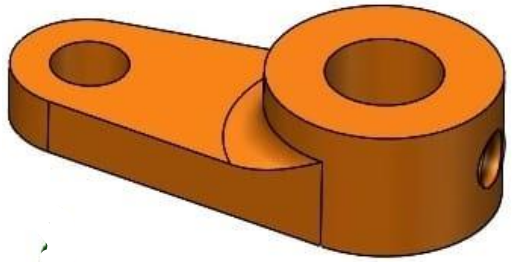
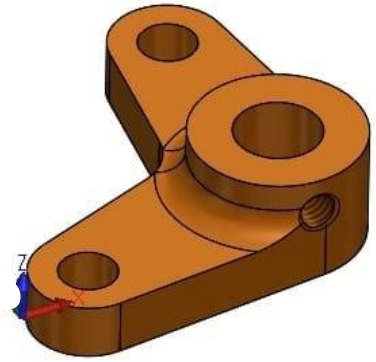


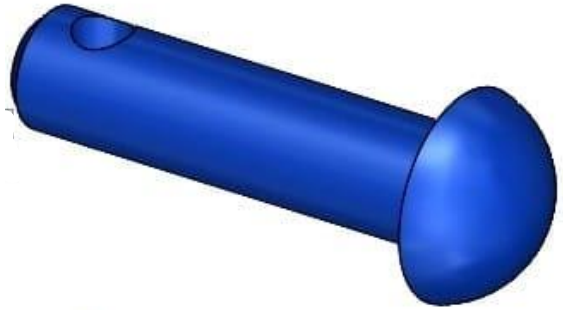
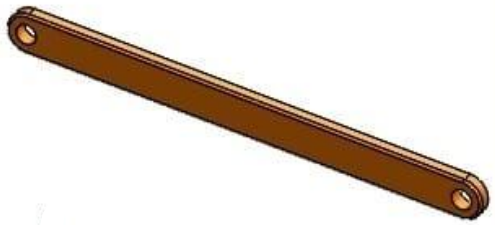


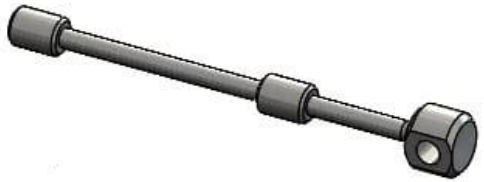
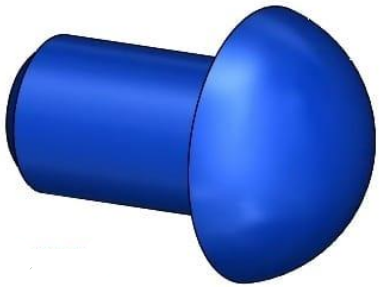

❑ CONTRIBUTION

TEJASREE GUNTURU

- Piston
- Plain Bearing
- Turbina Pulley
- Valve Linkage Bolt
- Valve Linkage
- Valve Linkage Rocker
- Valve Linkage Stud
- Valve Linkage Dual Rocker
- Valve
- Wooden Pin D6 L40
- Presentation slides

❑ CONTRIBUTION

BOKKA RAJA RAVI KIRAN REDDY

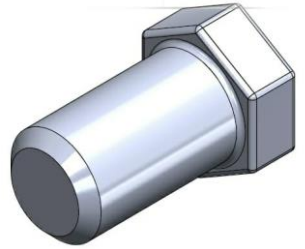
- Column
- Connecting rod head
- Cylinder
- Cylinder head
- Connecting rod link
- Inlet
- Presentation slides

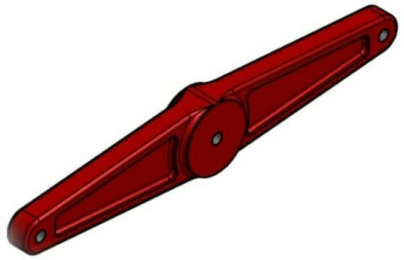
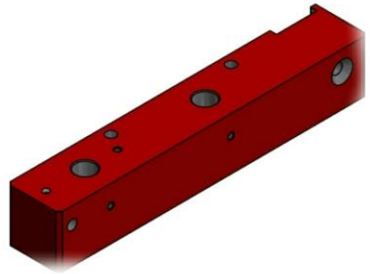
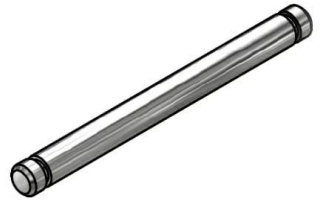
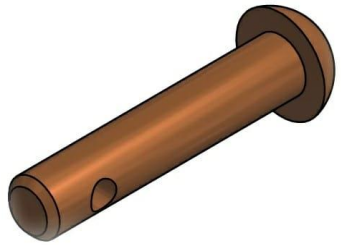
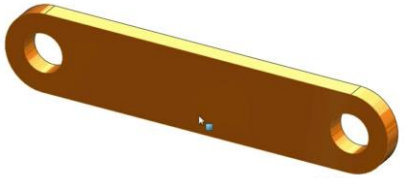
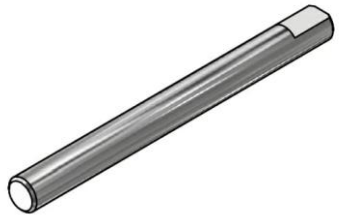
JAVAJI MANOJ BHARGAV

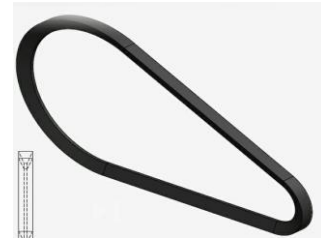
- Engine Base
- Engine Block
- Beam Linkage
- Beam
- Bearing Support
- Cranck shaft Rod
- Cranck shaft Nut
- Cranck shaft bolt
- Rod D6 L46
- Pin D4 L22
- Belt
- Presentation Slides

❑ CONTRIBUTION





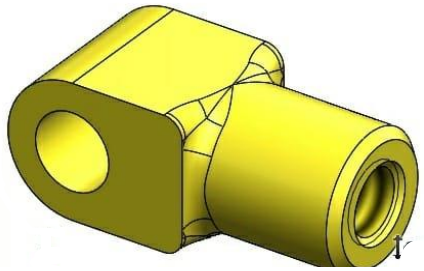
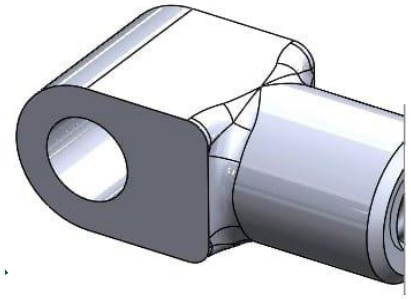
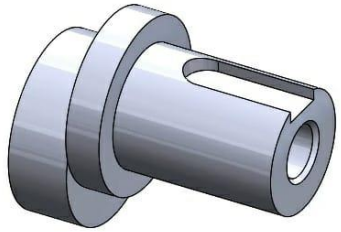
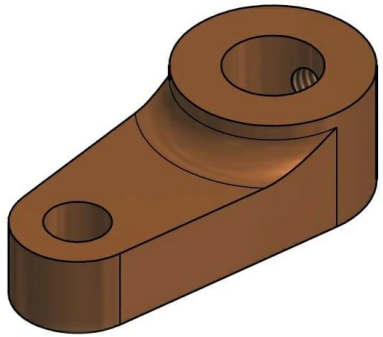
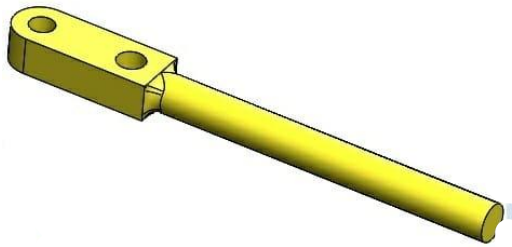
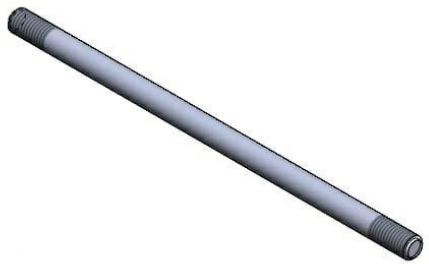
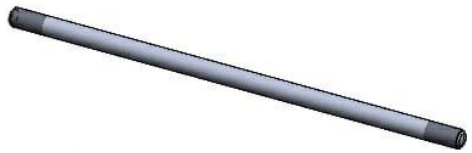










❑ CONTRIBUTION

SAKETH VADDAMANI

- Eccentric Hub
- Eccentric Strap Rod
- Eccentric Strap
- Eccentric Strap Head
- Piston Rod
- Piston Rod Head
- Piston Support Beam
- Piston Support Rod
- Crank Shaft Rocker
- Assembly


3D PRINTING DATA

Printing time required for the model	15 hours 10 min
Model Material Estimation	7.72 cubic inches
Support Material Estimation	1.55 cubic inches

Printer : stratos fortus 450