

DEADWEIGHTGRAVITYPOWERGENERATION

Muralidhar^{S1}, Harsha^{CM2}, Balraj^{U3}, Kiran^{G4}, Swamy^{M5}

JIT, Davangere, karnataka, India

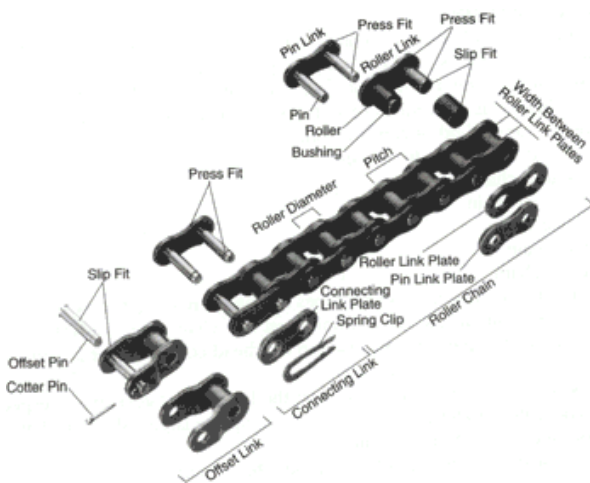
Abstract: The largest issue right now is how to conceptualize energy conservation. Alternative energy sources must be created and used to halt the negative impacts of pollution and global warming. Gravity is the name given to the force that is always at work on earth.

We created a device as a result that uses gravity as a source to create electrical energy. The system is designed so that the body's kinetic energy converts gravitational force into electrical energy. **Keywords:** pollution, kinetic energy, renewable energy, and gravitational force.

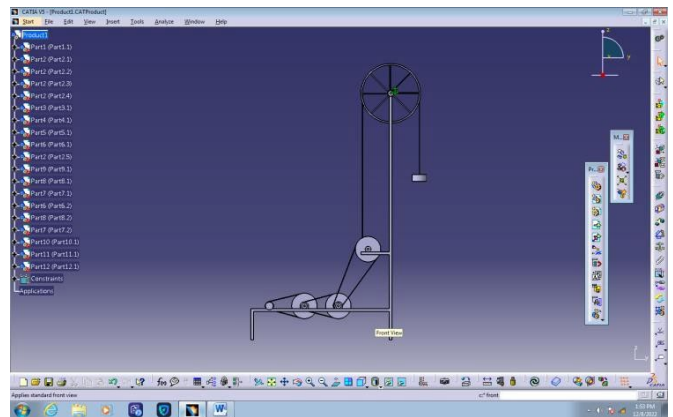
1. Introduction:

Today's rapid industrialization and urbanization are increasing demand for energy on a continuous basis. Even though it contributes to pollution and global warming, it serves the need for energy. In a few years, we will run out of water, wood, and coal. At a particular period, in place of sources like solar, wind, biomass, etc. As a result, we need extra energy sources to suit our needs. Because of this, we present a state-of-the-art method for generating power utilizing the continuous gravity of the earth, which permeates the entire world. In actuality, though, the design was unable to materialize as a body. It didn't function as they had anticipated, at least not in theory. preventing gravitational energy from reaching an Deign of the dead weight gravity power generation is shown in the below figure.

BasicStructure of Power Transmission Chain

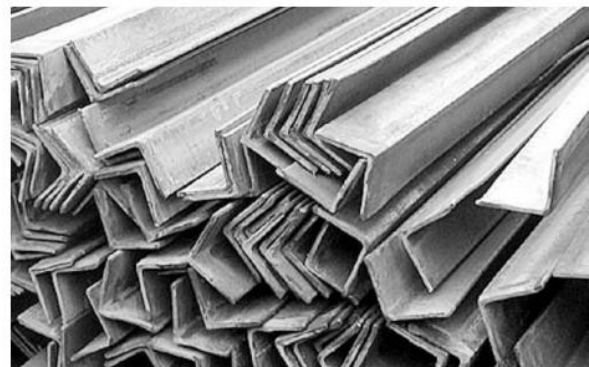


TapFitConnectingLink:



1.1 MAJOR PARTS: Wheel, Frame, Roller, Bush, Chain, Flywheel, Sprocket, Free Wheel, Bearing, Sprocket, Flywheel, Spur, Generator.

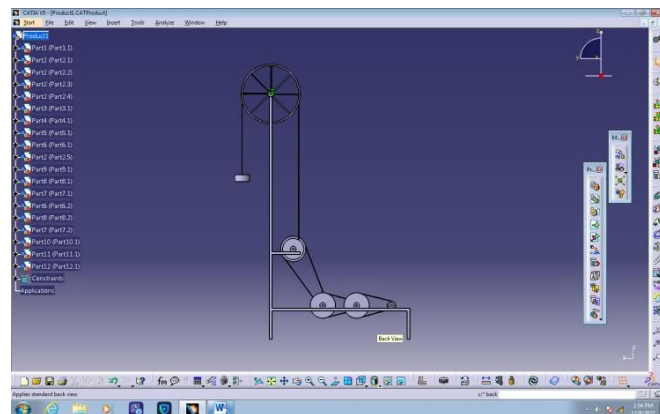
1.2 MILDSTEEL



NUT AND BOLT



ARCWELD



2. DESIGNPROCEDURE:

- **DESIGNOFBALL BEARING:**
- BearingNo.6202
- OuterDiameterofBearing(D)=35 mm

- ThicknessofBearing(B) =12mm
- InnerDiameteroftheBearing(d)=15mm
- r_1 =Cornerradiiionshaftandhousing
- r_1 = 1(Fromdesigndatabook)
-
- MaximumSpeed =14,000rpm
(Fromdesigndatabook)
- MeanDiameter(d_m) = $(D + d) / 2$
-
-
- = $(35+15)/2$
-
- d_m = 25mm

▪ WAHLSTRESSFACTOR:

- $K_s = \frac{4C-1}{4C-4} + \frac{0.65}{C}$
- = $\frac{(4X 2.3)-1}{(4 X 2.3)-4} + \frac{0.65}{2.3}$
- $K_s = 1.85$

▪ SPURGEAR:

▪ (1)GEAR-2

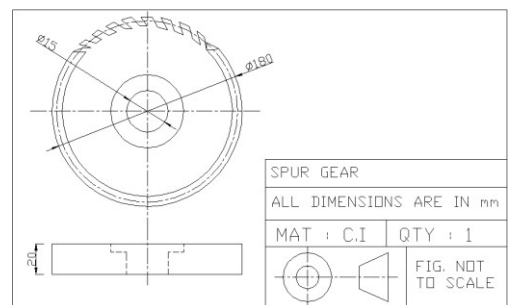
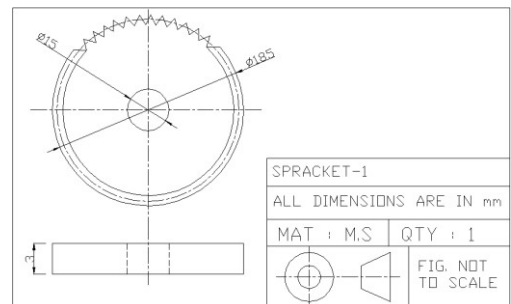
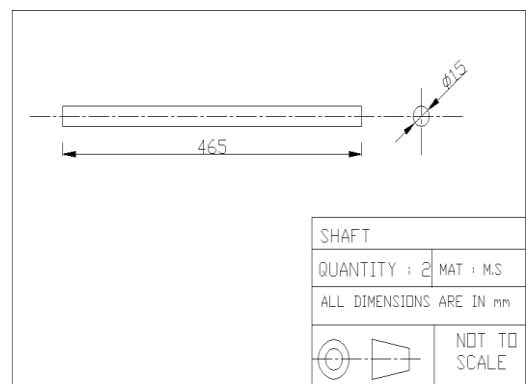
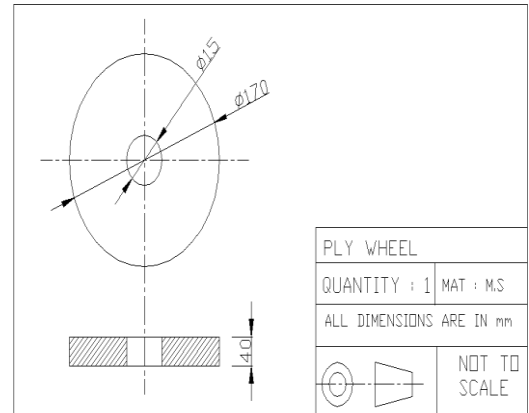
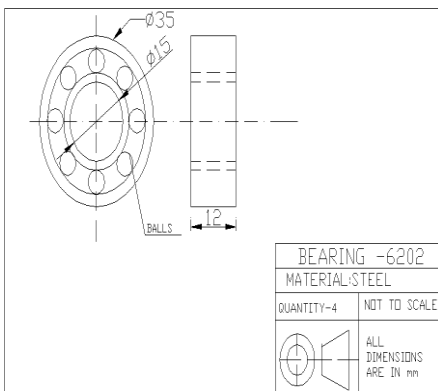
- Numberofteeth=32 – 1 Nos.
- Overalldiameter=60x 1
- =60mm
- Pitchdiameter=50x Module
- =50x1
- =50mm
- Depth =
(Addendum+Dedendum)xModule
- =2.157x1
- =2.157mm
- PressureAngle =14½°

▪ (2)GEAR-3

- Numberofteeth =180–1Nos.
- Overalldiameter=180xModule
- =180x1
- =180mm

- Pitchdiameter =172xmodule
- =172x1
- =172mm
- Depth =2.157xModule
- =2.157x1
- =2.157mm
- PressureAngle =14½°
- Themassofabody= 60Kg(Approximately)
- Here,
- Force = WeightoftheBody
- = 60Kgx9.81
- = 588.6N
- Time and Reduction Ratio Results For

2000mmCADD



SCOPE OF STUDY

- A. The choice of the gravity power producing technique is the most fundamental need for power generation.
- B. Create electricity by using gravity to transform potential energy into kinetic energy.
- C. To use gravity power generation to produce up to 60 watts of power.
- D. When feasible, steer clear of simplistic structures.
- E. A higher conversion ratio is required. F. A prolonged energy conversion requires some beginning energy.

CONCLUSION

We can say that harnessing gravity to generate power is a viable option because we were able to finish the project using a mechanical model. This industry can continue to develop to become more efficient and inventive. At this time, it is anticipated that in the future, renewable energy sources will be able to meet all of the world's energy needs. Solar, wind, tidal, and geothermal energy are a few well-known examples of sustainable energy sources. These sources have certain geographical and other constraints, though, so they are not available to everyone. On the other hand, gravity exists everywhere on our world. As a result, we are able to produce power on a massive scale, such as using gravity, anytime, anyplace. Kerosene lamps should be replaced with products devoid of any fuel to cut down on greenhouse gas emissions.

REFERENCES

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