
Worm and Worm Gear : Theory Q&A

Submitted by sameerengr on Sat, 07/09/2022 - 16:56

WORM and WORM gear :

A worm drive is an arrangement of gears in which a worm (In the form of screw) meshes with a worm wheel (in the form of spur gear). A worm gear can transmit motion (speed reduction) as well as it can transmit high torque. Another distinguishing feature of worm gear unit is that they transfer motion in 90 degrees.

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Bevel gear : Theory Q&A

Submitted by sameerengr on Sat, 07/09/2022 - 16:54

Q.1. Where bevel gears are used? what is their speciality?

What are different types of bevel gears?

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Helical gear: Theory Q&A

Submitted by sameerengr on Sat, 07/09/2022 - 16:53

Q.1. Compare the contact between mating of spur and helical gears teeth? Which is better?

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Spur Gears: Theory Q&A and Numerical Problems

Submitted by sameerengr on Sat, 07/09/2022 - 16:52

Theory questions and answers on SPUR GEARS

Q.1. State the applications of Gear drives?

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Fluctuating loads design : Theory Q&A and Numerical Problems

Submitted by sameerengr on Sat, 07/09/2022 - 16:51

Theory question and answers on Fluctuating Stresses

Q.1. What are the various factor that reduce fatigue strength of the material? What factors should be considered while designing against fatigue failure? How the endurance limit for a given component is obtained from the endurance limit from standard test?

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Belt drives:Theory Q&A and Selection of Flat and V belts

Submitted by sameerengr on Sat, 07/09/2022 - 16:50

Key Points to Remember

- Belt transmission is comparatively simple, trouble free, easy to be serviced ,maintained and have relatively low initial cost.
- Belts can connect non-parallel shafts also.
- Belts do not have space constrain, lubrication or heating issues.
- Since belts are flexible matreial there is inbuit shock protection.
- Mainly belt drives are Flat belt drive and V- belt drive
- Flat belts although simple and economical they have relatively less grip and make more noise.

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Power Screw Design

Submitted by sameerengr on Sat, 07/09/2022 - 16:48

Key Points to remember

- A power screw is a device which is used to convert rotary motion into translatory motion and thereby transmitting power. Typical applications involve screw jack,fly press, C clamp,testing machines, lead screw of lathe machine and many other machine tool applications.

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Shaft coupling design Procedure/Numericals

Submitted by sameerengr on Sat, 07/09/2022 - 16:18

Shaft Coupling Design :Theory Questions and answers and Numerical problems

Shaft coupling design article containg design procedure and numerical problems of different types of couplings commonly

used.

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Shaft Design Theory questions and numerical

Submitted by sameerengr on Sat, 07/09/2022 - 16:16

Shaft Design : Theory questions and numericals

Shaft design theory questions and answers : The theory questions on shaft design contain the various question and their answers related to shaft design.

Q.1. Distinguish Between Shaft, Axle and Spindle

Following table provides the difference

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Bolted Joints : Theory and Design problems

Submitted by sameerengr on Sat, 07/09/2022 - 16:14

Bolted joints and welded joints

Bolted joints are mainly used as temporary fasteners, which can be connected or disconnected whenever required.

Mechanical engineering needs the components to be attached to each other temporarily or permanently for the functioning of the machine. Following are the three types of joints are used in mechanical engineering.

1) Welded joints,2) Riveted joints 3)Bolted joints

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