Azoka Chisom Israel

17/ENG06/017

Mechanical Engineering

Assignment

MEE312

1. The two types of friction are dry friction and wet friction.

Dry friction is a force that opposes the relative lateral motion of two solid surfaces in contact. It occurs at the interface between two bodies in relative motion with contact. Dry friction also has two dominant components, one associated to displacement (static friction) and the other velocity (kinetic friction). A practical example of dry friction is rubbing your arms to keep warm from the cold, antifriction bearings, which have to operate without a liquid lubricant will experience high wear, therefore a solid composite is used within the spacing of the bearing while wet friction exists where the parts being rubbed together have some other substance between them such as oil or grease. It is the opposite of dry friction. A practical example of wet friction is putting water over a slide, and putting oil between two gears.

1. Types of machines

Wedges: A wedge is a triangular shaped tool that is a simple machine, it is a portable inclined plane that can be used to separate two objects or portions of an object. It is often made of metal, stone or plastic and is thick on one end and tapers to a thin or sharp edge on the other end. Examples of wedges are knives axes and doorstoppers. A wedge can be used in many way.

To cut

To split

To tighten and hold back.

Square Threaded screws: A square thread screw is a common screw thread form, used in high load applications such as lead screws and jack screws. This screw gets its name from the square cross section of the thread. It is the most efficient thread form. It has both advantages and disadvantages, the advantage being that they have a much higher intrinsic efficiency and the disadvantage being the difficulty in machining such a thread.

Journal Bearings: These are one of the most common types of hydrodynamic bearings. Their primary function is to support a rotating shaft. They are used in various subsystems in engines and power trains. It is the rotating support placed between moving parts to allow them to move easily. There are 3 main journal bearing types

.Pressure dam bearing

.Offset halves bearing

.Tilting pad journal bearing