

Chapter:4

(Constructional Feature of Measuring Instruments)

The Parts of An Indicating Instruments:

1. Moving System Support.

2. Permanent Magnet.

3. Pointer & Scale.

4. Cover.

Description of the various parts of instruments:

- Description of the various parts of instrument 1. Moving system support Support for an indicating instrument is provided in two ways, viz. (A) With the help of Pit, (b) With the help of hanging thread. A.
- (A) With the help of Pit: In this method the end of the spindle is conical and it is made of solid steel. Inside the conical hole in the fixed part of the instrument, two ends of the spigot are placed on the jewel. Murals do the work of bearing. The contact area should be less to reduce friction in the pad. But the pressure per single area is careful Need to be considered. Especially if the pivot is very sharp, then the crushing strength of the peat substance. May exceed. Although the Pidan's touch area is extremely small and the moving system weighs only a few grams, it is still per square inch. The pressure can be a few tons. For example, this pressure can be 40 (eighty) tons per square inch or more

- .(1) The advantage of hanging yarn with the help of spinning yarn is that when the operating force is less than the weight of the moving system, Since it avoids bearing friction. But such inflating is a good thing and also a protection against shock and injury is required. The hanging work is usually done with 'phosphor bronze sheet'. 2. Nothing in the world is permanent in a permanent magnet, the magnet is a far cry. However, in many cases when a permanent magnet is used in the instrument, care must be taken to ensure that its strength does not change easily over time. These magnets can be made of slightly tungsten or solid steel mixed with cobalt and chromium. Cobalt and chromium alloyed steels have higher coercive force and are not self-demagnetized like magnets made of tungsten steel. Over the past few decades, there has been considerable progress in the development of magnetic materials in the manufacture of permanent magnets, especially in the United States of America, and the alloys of iron, nickel and aluminum, ALNICO and ALCOMAX, in the United Kingdom, have been found to have good properties. 3. The size of the pointers and pointers used depends on the type of instrument. In all cases the pointer one and the inertia are kept as low as possible so that the load on the bearing of the moving system is less. Aluminum sheets or tubes are used as pointers for lightening. In many cases V-shaped pointers are also used for reinforcement.