9. Bearing Handling

Bearings are precision parts and, in order to preserve their accuracy and reliability, care must be exercised in their handling. In particular, bearing cleanliness must be maintained, sharp impacts avoided, and rust prevented.

9.1 Bearing storage

Most all rolling bearings are coated with a rust preventative before being packed and shipped, and if the package remains intact, bearings can be stored for many years. Observe the following precautions:

(1) Bearings should be stored at room temperature with a relatively humidity of less than 60%.

(2) If bearings come packed in a wooden box, take them out of the wooden box immediately, and store them on a shelf, at least 20 cm off the ground. (Shown in Fig 9.1)

(3) Do not stack bearings because the protective anti-rust compound may be squeezed out of bottom bearings.

9.2 Installation

When bearings are being installed on shafts or in housings, the bearing rings should never be struck directly with a hammer or a drift, because damage to the bearing may result. Any force applied to the bearing should always be evenly distributed over the entire bearing ring face. Also, when fitting both rings simultaneously, applying pressure to one ring only should be avoided because indentations in the raceway surface may be caused by the rolling elements, or other internal damage may result.

Bearings should be fitted in a clean, dry work area. Especially for small and miniature bearings, a “clean room” should be provided as any dust in the bearing will greatly affect bearing efficiency. Before installation, all fitting tools, shaft, housings and related parts should be cleaned and any burrs or cutting chips removed if necessary.