WHAT IS CLAIMED IS:

1. An operation accuracy measuring system for measuring operation accuracy of a linear motion mechanism in an apparatus that includes a support table having a support surface for supporting an object thereon, a working unit for processing the object supported on the support table, and the linear motion mechanism that linearly moves the working unit and the support table relatively to each other along feed directions, the operation accuracy measuring system comprising:

a white light interferometer for observing a working spot on the support table where the working unit works on the object, the white light interferometer being connected to the working unit to be movable in a direction perpendicular to the feed directions; and

a measuring jig having a flat lower surface, a parallel surface opposite and parallel to the lower surface, and a slanted surface joined to the parallel surface through a straight boundary line and inclined to the parallel surface, wherein

the measuring jig is placed on the support table or a table base for supporting the support table with the boundary line being oriented in a direction parallel to the feed directions and positioned at a position where

the parallel surface and the slanted surface are capable of simultaneously being observed in an observation zone of the white light interferometer, and while the linear motion mechanism is operated to linearly move the working unit and the measuring jig relatively to each other in one of the feed directions, the white light interferometer captures images of the parallel surface and the slanted surface of the measuring jig, and changes in interference fringes appearing in different image sections of the captured images are observed, with one section representing the parallel surface and the other representing the slanted surface, after which the operation accuracy of the linear motion mechanism is deduced on a basis of the observed changes in the interference fringes.

2. An operation accuracy measuring method for measuring operation accuracy of a linear motion mechanism in an apparatus that includes a support table having a support surface for supporting an object thereon, a working unit for processing the object supported on the support table, and the linear motion mechanism that linearly moves the working unit and the support table relatively to each other along feed directions, the operation accuracy measuring method comprising:

a placing step of placing a measuring jig on the support table or a table base for supporting the support table, the measuring jig having a flat lower surface, a parallel surface opposite and parallel to the lower surface, and a slanted surface joined to the parallel surface through a straight boundary line and inclined to the parallel surface;

an adjusting step of adjusting orientation of the measuring jig to make the boundary line of the measuring jig parallel to the feed directions and adjusting positions of the measuring jig and a white light interferometer connected to the working unit to allow the white light interferometer to observe the parallel surface and the slanted surface simultaneously;

an interference fringe observing step of, while the linear motion mechanism is operated to linearly move the working unit and the measuring jig relatively to each other in one of the feed directions, capturing images of the parallel surface and the slanted surface of the measuring jig with the white light interferometer and observing changes in interference fringes appearing in different image sections of the captured images, with one section representing the parallel surface and the other representing the slanted surface; and

an operation accuracy deducing step of deducing the operation accuracy of the linear motion mechanism on a basis of the observed changes in the interference fringes.

3. The operation accuracy measuring method according to claim 2, wherein

the operation accuracy deducing step includes

deducing yawing accuracy as an element of the operation accuracy on a basis of a maximum change observed in a tilt angle of the interference fringes in the image section representing the slanted surface while the working unit and the measuring jig are being moved relatively to each other,

deducing pitching accuracy as another element of the operation accuracy on a basis of a maximum change observed in brightness of the interference fringes in the image section representing the slanted surface while the working unit and the measuring jig are being moved relatively to each other, and

deducing rolling accuracy as still another element of the operation accuracy by observing whether or not there are interference fringes appearing in the image section representing the parallel surface or by observing changes in intervals between the interference fringes in

the image section representing the slanted surface while the working unit and the measuring jig are being moved relatively to each other.

4. The operation accuracy measuring method according to claim 2, wherein a gradient of the slanted surface with respect to the parallel surface of the measuring jig ranges from 1/15000 to 1/5000.

5. The operation accuracy measuring system according to claim 1, wherein a gradient of the slanted surface with respect to the parallel surface of the measuring jig ranges from 1/15000 to 1/5000.