A

Laser Calibration Optics, Accessories and Set-up

Fig. A.1. Optics and accessories for linear measurements

1 Two posts and height adjusters
2 Linear Interferometer
3 Knurled attachment screws
4 Two linear retroreflectors
5 Base
1. Two posts and height adjusters
2. Angular reflector
3. Angular interferometer
4. Two alignment targets
5. Base

Fig. A.2. Optics and accessories for angular measurements

A. Measurement along the X-axis
B. Measurement along the Y-axis
C. Measurement along the Z-axis with the laser beam bent vertically 90° to the optics

1. Angular reflector mounted on a height adjuster with a post and base
2. Angular interferometer mounted in a spindle
3. Laser beam
4. Laser head
5. Angular reflector mounted on a spindle
6. Angular interferometer mounted on a height adjuster with a post and base

Fig. A.3. Set-up for pitch measurements
Fig. A.4. Set-up for yaw measurements

A Measurement along the Y-axis
B Measurement along the X-axis
C Measurement along the Z-axis with the laser beam bent vertically 90° to the reflector

1 Angular reflector mounted on a height adjuster with a post and base
2 Angular interferometer mounted in a spindle
3 Laser beam
4 Laser head
5 Angular interferometer mounted on a height adjuster with a post and base
6 Angular reflector mounted in a spindle
Fig. A.5. Optics and accessories for straightness measurements

Fig. A.6. Set-up for X-axis and Y-axis straightness measurements
Fig. A.7. Optics and accessories for squareness measurements (horizontal plane)

Fig. A.8. Squareness measurements - first axis (horizontal plane)
Fig. A.9. Squareness measurements - second axis (horizontal plane)

Optical square kit
1 Optical square base
2 Optical square

Straightness accessory kit
3 Reflector mount
4 Straightness retroreflector
5 Reflector base and posts

Long-range optics kit
6 Long-range reflector
7 Long-range interferometer

Short range optics kit
8 Short-range reflector
9 Short-range interferometer
10 Height adjuster and post

Turning mirror kit
11 Turning mirror
12 Turning mirror base
13 Reflector target

Fig. A.10. Optics and accessories for squareness measurements (vertical plane)
A Laser Calibration Optics, Accessories and Set-up

Fig. A.11. Squareness measurement - second axis (vertical plane)

Fig. A.12. Diagonal measurement kit
Fig. A.13. Optics and accessories for diagonal measurements

Fig. A.14. Typical diagonal measurement set-up
References


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