

Abstract

Laser holography has been experimented by using He-Ne laser with 10 milliwatts output and 10E75 Holotest films. Transmission holograms was conducted and give diffraction efficiency of 0.11 %. Optical bench with vibration-free structure was designed and constructed. It has a total weight of about 1 ton. Laser interferometry on this optical bench gives fine and stable interference pattern. This proves that our optical bench is appropriate for laser holography experiments. The application of hologram for pattern recognition was also demonstrated.