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## Hazard Control for Lasers

The type of laser which has found the greatest use in the construction industry has been the helium neon gas laser. Its beam has been used to project a reference line for construction equipment in such operations as dredging, tunneling, pipe laying, bridge building and marine construction.

### Hazard Controls:

1. Lasers should not be left unattended during operation. Beam shutter or caps should be utilized, or the laser turned off when laser transmission is not actually required.
2. Personnel who work with laser units should become aware of the potential eye hazards and the importance of limiting unnecessary exposure.
3. A warning sign should be attached to laser equipment in a conspicuous location indicating the potential eye hazard associated with the laser and warned against looking into the primary beam.
4. The use of corner cube retroreflectors should be avoided at close ranges if the reflected beam is to be observed.
5. The use of binoculars or aiming telescopes should not be used to view the direct beam unless the beam intensities are greatly below safe levels.
6. During the alignment and set-up procedures, care should be taken to avoid aiming the laser into potentially occupied areas.
7. Stable mounts for the laser are important so that it can be readily controlled.

Despite the potential hazards, the laser beam can be used safely if the proper procedures and necessary precautions are followed:

No employee other than highly trained personnel should be permitted to work in an area where the worker could come into direct contact with a laser beam.

The work area should be brightly lighted to prevent dilation of the pupils.

All surfaces in laser area must be nonreflective.

Work areas should be monitored regularly for ozone or other potential contaminants and stray radiation.

In utilizing a laser, always check manufacturer's precautions and guidelines for that particular unit.