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Log 257

Without ground reference and with the time interval involved with the descent rate of this type aircraft, an experienced pilot would be unlikely to disregard the altimeter in his instrument scan throughout 300 feet of descent. Turbulence or icing conditions were not present to distract him from his primary approach task, nor was the existing wind a factor to create concentration problems in order to maintain the aircraft on the approach course. In fact, the pilot had departed from the La Crosse Airport twice that day and he had completed the same approach several hours earlier under similar reported weather observations.

Confident of the aircraft performance and anticipating that flight conditions at the runway threshold would duplicate the weather existing on the previous approach earlier that day, the pilot may have intentionally descended below and leveled off at some altitude below the minimum descent altitude. Shortly thereafter, the aircraft descended to treetop level. Apparently, the final descent was gradual, unintentional, and unrecognized.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this accident was that for reasons unknown, the captain failed to maintain altitude at minimum descent altitude and allowed the aircraft to descend below the height of trees while executing a nonprecision instrument approach in instrument flight conditions.

RECOMMENDATION

During an analysis of low-visibility approach accidents, where flight-path obstruction clearance was a factor, the Board questioned whether accurate altimetry, illusions of height, and altitude awareness may have been involved in the causal area. The Board believes that this accident, and others which have occurred under similar instrument conditions, may have been averted if both pilots had maintained a continuous cross-reference to their respective altimeters.

The Board recommends to the Federal Aviation Administration that:

Flightcrew techniques be developed for use during the execution of nonprecision instrument approaches that will require continued altitude reference callouts by the non-flying pilot during the time the aircraft is maintaining the minimum descent altitude. These callouts should be made at reasonable time intervals.

AAR-71-10

until the aircraft crosses the runway threshold, or
until a missed-approach procedure is commenced.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/ JOHN H. REED
Chairman

/s/ OSCAR M. LAUREL
Member

/s/ FRANCIS H. McADAMS
Member

/s/ LOUIS M. THAYER
Member

/s/ ISABEL A. BURGESS
Member

May 5, 1971.