

HAZOP

A hazard and operability study (HAZOP) is a structured and systematic examination of a complex planned or existing process or operation in order to identify and evaluate problems that may represent risks to personnel or equipment.

A HAZOP is a group activity with a dedicated experienced HAZOP chair who takes a multidisciplinary team through the P&IDs in a structured manner, identifying hazards and action owners.

The P&IDs will be split into smaller sections called "Nodes," and reference will be made to deviation guide words to assist in identification of risks. HAZOPs may last a number of weeks for large projects.

Parameter/Guidewords	Deviations
Flow	No, Less, More, Reverse, Misdirected
Pressure	Higher, Lower, No, Reverse, Vacuum
Level	Higher, Lower, Varying, Fluctuating
Temperature	Higher, Lower

Table 25.2 Sample HAZOP guide words.

HAZOPs will be carried out during studies, FEED, and detail design in increasing detail as P&IDs mature.