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ASSIGNMENT

1. Briefly discuss hazard operability technique

Hazard and Operability Technique (HAZOP) is a systematic investigation of a present or planned process or operation. It 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. In this technique, a multidisciplinary team consisting of internal and external experts make use of 'Guide Words' to identify possible hazards resulting from deviations. The intention of performing a HAZOP is to review the design to pick up design and engineering issues that may otherwise not have been found. The purpose of the HAZOP is to investigate how the system or plant deviate from the design intent and create risk for personnel and equipment and operability problems. HAZOP studies have been used with great success within chemical and the petroleum industry to obtain safer, more efficient and more reliable plants.

2. State the significance of HAZOP technique

The significance of HAZOP is to identify and evaluate any problems within a plant or work environment that could pose a risk to the employees or equipment. It also looks at processes that might prevent the facility from running as efficiently as it should.

The HAZOP technique is qualitative, and aims to stimulate the imagination of participants to identify potential hazards and operability problems, Identification of such deviations is facilitated by using sets of "guide words"

as a systematic list of deviation perspectives. The results can be used to reduce the likelihood of costly and time-consuming malfunctions while increasing operational safety and availability. They cover all existing standards and new complex technologies to improve the insurance terms of a plant.

3. With the aid of a block diagram, list the components of hazard operability

The components of HAZOP entail these steps shown in the block diagram below;

