Guarding of Pumping Units

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Contents

Contents

Page

Figures

Guarding of Pumping Units

1 Scope

This recommended practice (RP) provides a reference or guide for the design, manufacture, and installation of guards for moving parts on pumping units. It is based on knowledge and experience gained through the application of guards for pumping units by the production segment of the petroleum industry.

2 Normative References

There are no referenced documents that are indispensable for the application of this document.

3 Terms and Definitions

There are no terms or definitions for this document.

4 General

This RP is intended to provide safeguards for all persons who are required to work around or on oil well pumping units.

These safeguards should prevent bodily injury from contact with moving parts by anyone inadvertently walking into, falling, slipping, tripping, or similar action. The safeguards should also prevent injury from reasonable or predictable breakage of any of the component parts.

Where unattended locations present close exposure to a community of people, safety barriers, such as provided by a totally enclosed and locked perimeter, may be required (see 7.3.4).

Pumping unit manufacturers shall provide instructions for identifying and isolating all energy sources and preventing any movement of the unit while maintenance activities are being performed.

It is the responsibility of the end user to identify and ensure that all local, state, and federal regulations specific to the pumping unit installation site are met. When there is conflict between requirements, the stricter of the two shall apply.

5 Types of Guarding to be Used on Pumping Unit

5.1 General

The general types of guards include those listed as follows or combinations thereof.

5.2 Enclosures and Guardrails

Enclosures usually provide the greatest degree of protection against moving parts of mechanical equipment. Guardrails sometimes offer less effective protection than enclosures of proper dimension and the use of guardrails shall be confined to protecting against slow moving equipment such as cranks, counterweights, air counterbalance tanks, and horseheads. Both enclosures and guardrails should be strong enough to withstand the impacts and loadings imposed upon them without collapsing against the moving mechanism they protect against, and their dimensions should be within the limits prescribed in Section 7.