

MAGNET

DESCRIPTION

A downhole Magnet is a tool used in the oil and gas industry to retrieve ferromagnetic (magnetically attracted) objects from a well. These objects may be accidentally dropped downhole or be the remains of broken equipment.

Purpose:

Retrieving dropped tools: The primary purpose is to retrieve drill bits, centralizers, and cutters, tubing components, valve parts, wire, chips, nuts, bolts, and other metal objects from the well.

Well cleaning: Removing metal chips, scale, and other contaminants generated during drilling, workover, or well operation. This is especially important for maintaining well productivity and preventing damage to downhole equipment.

Inspection: Magnets can be used to collect samples of metal chips to analyze equipment wear and identify potential problems.

FEATURES

- **Time and Cost Savings:** Retrieving fallen objects using a downhole magnet is significantly faster and less expensive than alternative methods such as drilling out or using specialized wellbore catchers
- **Maintaining Well Integrity:** Unlike methods requiring drilling out, using a magnet avoids damage to the casing and other well equipment, preserving its integrity and extending its service life
- **Accident Prevention:** Timely retrieval of fallen objects prevents them from moving further downhole and damaging other equipment (e.g., pumps, valves), which can lead to accidents and costly downtime
- **Ease of Operation:** Operating a magnet is relatively simple and requires no special training, minimizing human error and increasing efficiency
- **Wide Range of Applications:** Magnets can be used to retrieve a wide range of metal objects of various sizes and shapes, as well as to clean wells of metal contaminants. Samples for analysis: Magnetically extracted metal samples allow for equipment wear analysis, allowing for breakdown prediction and timely preventative maintenance

