

Suggested Pigging Procedures

Pigging for Pipeline Efficiency

The purpose of operational pigging is to obtain and maintain efficiency of the pipeline to be pigged. The pipeline's efficiency depends on two things: first, it must operate continuously, and second, the required throughput must be obtained at the lowest operating cost.

Pipelines are pigged for many reasons. In crude oil pipelines, wax removal or control is important to maintain line efficiency. Liquid removal in wet gas pipelines and removal of debris in the pipe are also important.

After determining the cause of the reduced pipeline efficiency and selecting the desired pig, a pigging program can be established. The effectiveness of the pigging program can be evaluated by how much debris is in the receiving trap, or by monitoring the discoloration of the liquid that accumulates in the receiving trap.

Pre-Run Inspection

The pig must be in good condition if it is to do the job it was selected to do. If the pig has been run before, it should be inspected to assure it will run again without stopping in the pipeline.

Measure the outside diameter of the pig's sealing surface with a special diameter tape or, using a regular tape, measure the circumference of the pig's sealing surface and divide the measurement by 3.1416. This diameter must be larger than the inside pipe diameter to maintain a good seal.

Inspect the sealing surfaces to assure there are no cuts, tears, punctures or other damage which will affect the pig's ability to run in the pipeline.

The unrestrained diameter of brush pigs should also be measured to assure that the brushes will maintain contact with the pipe wall during the complete run.

When using brush type mandrel cleaning pigs, the brushes should be inspected for corrosion or breakage. Every precaution should be taken to prevent these brushes from breaking in the pipeline. Loose bristles can damage valves, instrumentation, and other pipeline equipment. All components of brush type mandrel pigs should be checked to be certain that they are tight and in good condition.

Pig Launching & Receiving

Pig launchers are used to launch the pig into the pipeline, and pig receivers are used to receive the pigs after they have made a successful run. The design of these pig traps will depend on the type of pig to be run and pipeline design conditions. These designs are not covered here.

Provisions in the station design should include handling equipment for pigs 20" and larger. Caution should be taken for liquid spillage from the pig traps.