



4.22 Stoppling Procedure

Purpose and Scope

Stoppling is a deviation that requires detailed planning and engineering and is only executed by qualified, experienced specialists.

Stoppling is a procedure used to mechanically isolate flow in a product line during process conditions.

Stoppling is a specialized operation and should not be considered where there is any practical alternative.

Due to the critical nature of this work, a job specific procedure must be developed dealing with the actual project. This procedure must be developed based on the use of this procedure along with the Owners procedure. Final procedure must include approval of both Petro-Line management and the Owner.

References

Safe Work Practice (3.18) "Construction (Hot Tap or Stopple Operations)"

Safe Job Procedure (4.11) "Construction (Operating Pipeline Excavation)"

Safe Job Procedure (4.12) "Winter Construction Excavation Supplement"

Procedure

Special Equipment

- Hot tap fitting supplied by Sub-Contractor (i.e. Williamson)
- Three-way gas detection
- Ultrasonic test instrument
- Branch connection
- Stopple machine and equipment
- Hot tap machine

Notes and Cautions

Stopples should not be located on the runs of piping where stress is apparent.

NDT inspection of the area of the pipeline where the stopple is to be installed. Owner's procedure should identify these requirements.

Pipe should not be out of round.

Owner should confirm CE levels of the carrier pipe steel. (i.e. spectrometer or spark test)



Pipe wall thickness can be reduced by:

- Corrosion
- Erosion
- Defects
- Lamination

When planning the excavation site, ensure that an earth plug (if possible) remains between the stopple and the work area to prevent movement of the stopple during work activities.

Execution

Procedures must be provided by the specialized stopple Contractor and should include the following:

1. Determine if the line can be hot tapped and stoppled.
2. Owner to establish job particulars with operations and contractor.
3. Weld on and test hot tap fittings and cut coupons. This must be completed as per the Owners welding procedures relative to the specific metallurgy of the carrier pipe.
4. Stopple the line as specified in the approved contractor procedures. See the following:
 - **Figure 1:** Typical Stopple Plugging Machine Drawing
 - **Figure 2:** Stopple Retracted
 - **Figure 3:** Stopple Inserted
5. Test for leakage at all hot tap fittings
6. Perform repairs or construction activity as required
7. Withdraw the stopple and isolate the stopple machine with the valves on the branch connection
8. Blind the valves and clean up the work site



FIGURE 1. Typical Stopple Plugging Machine Drawing

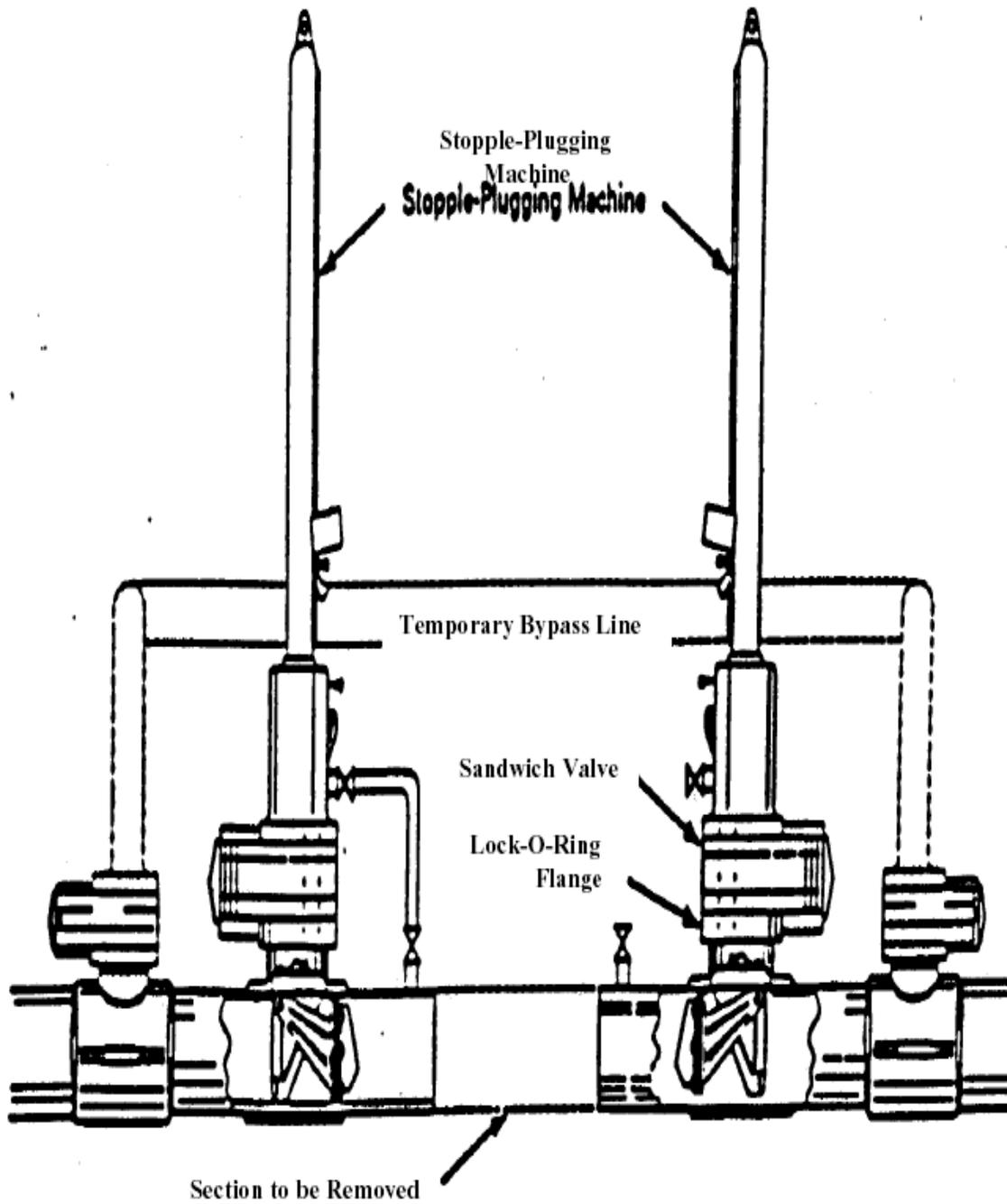




FIGURE 2. Stopple Retracted

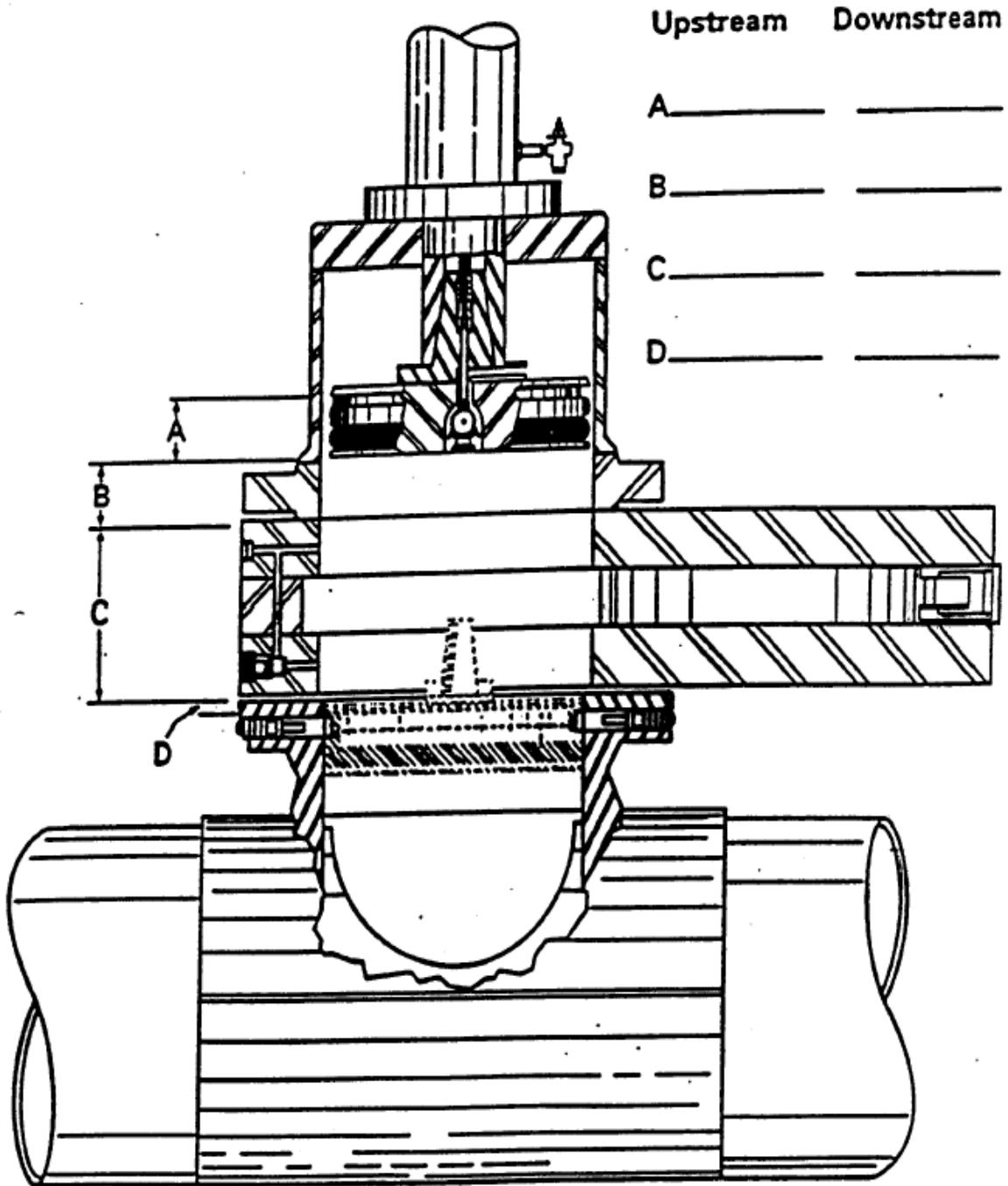




FIGURE 3. Stopple Inserted

