Pigging and Butterfly Valves

Important compatibility and risk considerations

General recommendation

Conventional butterfly valves are generally not suitable for pig passage because the valve disc and associated components obstruct the pipeline bore. Pigs Unlimited International, LLC does not recommend attempting to run standard pipeline pigs through butterfly valves.

Why butterfly valves present a risk

A pig may become lodged against the valve disc or be damaged while passing through the restricted opening. An unsuccessful attempt can damage the valve, pig or pipeline and may require an extensive recovery operation.

Specialized applications require engineering review

The original guidance describes an exceptional procedure using a specially designed pig. Such an operation should not be attempted based solely on general written guidance. Before considering it, qualified personnel should evaluate:

Valve configuration and condition. Identify the number, type and condition of butterfly valves and verify the manufacturer's restrictions.

Pipeline characteristics. Confirm pipe material, diameter, length, geometry, deposit thickness and deposit hardness.

Operating conditions. Evaluate available pressure, flow and velocity against the complete system design and approved limits.

Pig compatibility. Consult the pig manufacturer and valve manufacturer regarding a purpose-designed solution; do not substitute a standard foam or other conventional pig.

Monitoring and contingency planning. Develop an approved method for monitoring pig travel and differential pressure, including a recovery and shutdown plan.

Safety and responsibility

Do not partially close or otherwise manipulate a butterfly valve to force pig passage without a specifically engineered and approved procedure. Pressure changes, unexpected pig movement and valve damage can create serious hazards. Seek assistance from personnel experienced in specialized pigging applications.

Pigs Unlimited International, LLC does not recommend pigging through conventional butterfly valves. Any proposed exception requires independent technical evaluation and approval by the pipeline operator and other responsible parties.

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