


Selection And Application of Valves

CO₂ Capture Facility

Kårstø, Norway

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MAIN PROCESS (AMINE) SYSTEM

Gate valves

- Use for isolation of equipment, as vent and drain valves
- Use as root valves for instrument connections.
- Use for on-off service; they are not throttled.

Size and Type

- NPS 2 ½ and larger will be flexible wedge type.
- NPS 2 and smaller will be solid wedge type.

Check valves

- Use to prevent reverse flow in a line, typically at a pump discharge.

Size and Type

- NPS 2 ½ and larger are swing check type.
- NPS 2 and smaller are piston lift type.

Globe valves

- Use in applications where moderate throttling of flow is required, as for a manual bypass of a control valve

STEAM SYSTEM

Gate valves

- Use for isolation of equipment, as vent and drain valves
- Use as root valves for instrument connections.
- Use for on-off service; they are not throttled.

Size and Type

- NPS 2 ½ and larger will be flexible wedge type.
- NPS 2 and smaller will be solid wedge type.

Check valves

- Use to prevent reverse flow in a line, typically at a pump discharge.

Size and Type

- NPS 2 ½ and larger are swing check type.
- NPS 2 and smaller are piston lift type.

Globe valves

- Use in applications where moderate throttling of flow is required, as for a manual bypass of a control valve

COOLING WATER SYSTEM VALVES

Gate valves

- Use for isolation of equipment, as vent and drain valves
- Use as root valves for instrument connections.
- Use for on-off service; they are not throttled.

Size and Type

- NPS 2 ½ and larger will be flexible wedge type.
- NPS 2 and smaller will be solid wedge type.

Check valves

- Use to prevent reverse flow in a line, typically at a pump discharge.

Size and Type

- NPS 2 ½ and larger are swing check type.
- NPS 2 and smaller are piston lift type.

Globe valves

- Use in applications where moderate throttling of flow is required, as for a manual bypass of a control valve

Butterfly valves

- Use for isolation of equipment, as vent and drain valves
- Use for moderate throttling applications
- Class 125 and lower service will be rubber lined general service type
- Class 150 and higher service will be “high performance” type with double offset discs

MATERIAL SELECTION FOR ALL VALVE TYPES

Valve body and trim

- Selection of material will be based on compatibility with the associated pipe materials and suitability for the process fluid service.