Sentry™ Closure

Our industry leading Sentry closures increase safety and operational efficiency.

The Sentry closure design concept relies on a simple locking ring that slides within a groove machined into the outer flange or hub. When expanded to the closed position, the locking ring securely locks the door into position. This design methodology is proven within the oil and gas industry, provides distinct advantages of integral safety, and avoids the reliance on external clamps with combined screw thread expanders. Heavy-duty components are used to actuate the locking ring and are designed to withstand the rigors of long term operation. Components are designed and arranged to ensure secure retention of all-hinge hardware and simplified handling by fabricators. Sentry closures are available with the ASME 'U' stamp and can be supplied in compliance with most international design codes.

NOV Completion & Production Solutions

midstream@nov.com nov.com/midstream

Operation

The Sentry closure operating cycle consists of removing the pressure alert/safety segment assembly and then rotation of the actuator lever. This simple operation contracts the locking ring sufficiently to clear the outer hub, allowing the door to be pulled open. Closing is simply a reversal of the operation.

Sealing

A key feature of the Sentry closure is the pressure energized lip seal. Located within the face of the door (horizontal) or the hub (vertical) for protection, the seal is available in several materials to meet the demands of today's pipeline industry. The increased contact of the sealing surface reduces stress loads and extends the closure operating life. Designed to provide extended service life, the Sentry seal is a one-piece design consisting of an integral elastomeric seal and an anti-extrusion spring molded into the body of the seal.

Safety

Safety is a paramount in today's industry and the Sentry closure not only provides speed of operation, but also the benefit of integral safety features that prevent unsafe operation. With the locking ring in the locked and closed position, internal pressure creates a seating force that physically traps the locking element between the door and outer hub, making it impossible for the door to open. This design characteristic is further enhanced by the integral pressure alert valve (PAV) that threads into a pressure sensing port. A small removable segment of the locking ring is attached to the PAV forming a double safety feature and preventing accidental opening. Operation of the PAV provides positive indication as to the pressurized state of the pressure vessel.