CONTROVAL

TECHNICAL DATA SHEET

PROTECTION AND PROCESS

Pig launchers and receivers

Pig traps designed to ASME VIII Div. 1 with COMPRESS, with optional trolley.



Pig trap, San Tomé: launcher and receiver, 42 x 46 in, ANSI 600

AT A GLANCE

Pig traps built in our workshops.

01
Designed to ASME VIII Div. 1

02
Calculated with COMPRESS software

03
Skid package or pressure vessels only

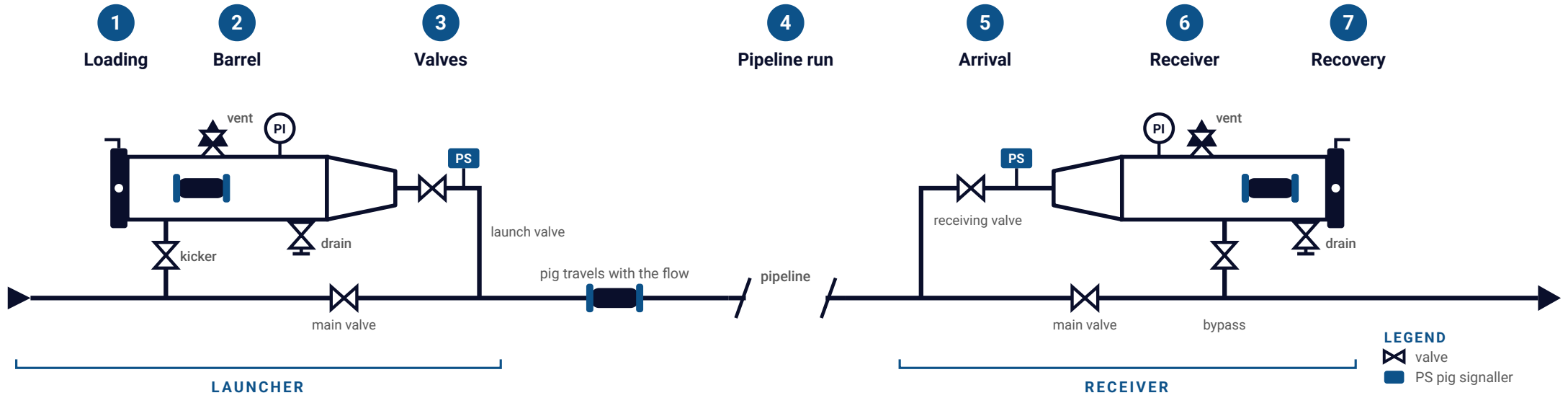
04
Optional trolley

How it works

Pig launchers and receivers let you run cleaning and inspection tools through your pipeline without stopping it.

We design them to ASME VIII Div. 1 using COMPRESS software, and offer an optional trolley for handling the pig. Our San Tomé pig traps are 42 x 46 in, ANSI 600.

We supply pig traps as a skid-mounted package or as the launcher and receiver pressure vessels only, as you require. Pig traps are used in daily pipeline operation and in construction: cleaning to improve line efficiency, crack inspection, internal diameter measurement, corrosion problems, separation of products in the line, and removal of water after the hydrostatic test.



Typical schematic configuration, shown for reference only. The final design, equipment, instrumentation and applicable codes depend on the client's process conditions, specification and project requirements, and are defined during engineering.

Step by step

In the order the fluid passes through it.

1 Loading and closure

With the trap isolated and depressurized, the closure is opened and the pig is loaded into the barrel. An optional trolley helps handle the pig.

2 Barrel, vent and drain

The barrel is a pressure vessel larger than the line. Vent and drain connections and a pressure gauge allow it to be filled, purged and depressurized safely.

3 Valves and launch

The kicker valve sends line flow behind the pig and the launch valve opens the way to the line. A signaller confirms that the pig has left.

4 Pipeline run

The pig travels with the flow, cleaning the line or carrying inspection instruments, with no need to stop production.

5 Arrival and receiving valves

The receiver is filled and pressurized before the pig arrives. With the receiving and bypass valves open and the main valve closed, flow is directed through the receiver. A signaller reports the pig arriving.

6 Receiver barrel

The pig stops in the receiver barrel while a bypass line keeps the flow moving. Liquids and debris collected with the pig are held in the barrel.

7 Isolate, drain and recover

The receiver is isolated, vented and drained. At zero pressure the closure is opened and the pig is removed.

OPTION

Optional trolley

A trolley carries the pig in and out of the barrel at the closure, so heavy pigs are handled with less effort.

OPERATION

Operating sequence

Each trap follows a set sequence of valve positions. We can supply a closure interlock and a written procedure, as agreed per project.

Typical configurations and options

Trap type	Launcher, receiver, or a launcher and receiver pair
Package	Major and minor barrel, eccentric reducer, quick-opening closure, valves, pressure gauges, tees and barred tees, structural baseplate, drain piping and interconnecting piping
Size	Barrel and line size to suit the pipeline and the pig; San Tomé traps are 42 x 46 in
Pressure class	ANSI class to suit the design pressure; San Tomé traps are ANSI 600
Design code	ASME VIII Div. 1 (UG-35) and ASME B31.3, B31.4 and B31.8, calculated with COMPRESS software
Closure	Bolted blind flange or quick-opening closure, with interlock as required
Valves	Main, launch / receiving, kicker or bypass, vent and drain; manual or actuated
Instruments	Pressure gauges and pig signallers; transmitters when required
Pig handling	Optional trolley at the closure
Materials	Carbon steel or alloy as the fluid requires; NACE materials for sour service
Supports	Barrel supports and saddles designed with the trap
Coating	Surface preparation and paint system to the site environment
Testing	Pressure test and inspection at our workshop before shipment
Interface	Tie-in connections to your pipeline, with flanged or welded ends

Standards and documentation

Designed to ASTM, ASME, ISO and API standards. The applicable codes are agreed per project.

TYPICAL REFERENCES

ASME VIII-1	Pressure vessels: barrel, reducer and closure (including quick-actuating closures, UG-35.2)
ASME B16.5 / B16.47	Pipe flanges and flanged fittings, standard and large diameter
ASME B31.4 / B31.8	Liquid and gas pipeline systems at the tie-in
API 6D	Pipeline valves
ASTM A516 / A105	Plate and forged steel materials
NACE MR0175 / ISO 15156	Materials for H2S-containing (sour) service

TYPICAL DOCUMENTATION PACKAGE

- ✓ P&ID
- ✓ General arrangement
- ✓ Vessel datasheets
- ✓ Design calculations (COMPRESS)
- ✓ FAT procedure and report
- ✓ Operation and maintenance manual

> Factory acceptance test (FAT) in our workshops and site acceptance test (SAT) at the installation site.

Our work

San Tomé district, Venezuela. 42 in PTO-TAEJ pipeline.



Pig trap, San Tomé: closure and barrel

Quick-opening closure, nozzles and barrel supports, after sand-blasting and painting.

The 42 x 46 in, ANSI 600 launcher and receiver pig traps send and receive internal cleaning tools and help assess the condition of the line, to plan maintenance of the collection lines. The design also allows intelligent tools for electronic line inspection. Scope: detailed engineering, material procurement, manufacture, non-destructive testing, hydrostatic test, sand-blasting and painting, packing, lifting and dispatch.

DELIVERED

Launcher and receiver pig traps, 42 x 46 in, ANSI 600, for the 42 in PTO-TAEJ pipeline	**San Tomé, Venezuela**

Need one built for your process?

controval.com

Send us fluid, flow, pressure and temperature, or just your idea. An engineer returns a proposed configuration.

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