/ AB SMART SERVICES · TECHNICAL DATASHEET

Mobile Pressure Bleed-Off System

A fully self-contained, trailer-mounted system for safe, controlled pressure relief and gas flaring on pipelines and wellheads — including sour gas — deployable at remote field locations without cranes or lifting equipment.

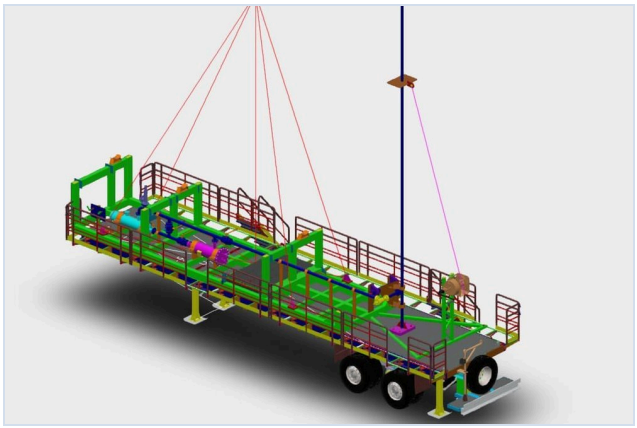


FIG. 01 · MOBILE PRESSURE BLEED-OFF SYSTEM · DESIGN RENDER

KEY FIGURES

5 steps
Connection to controlled flaring

1 skid
All components on a single skid or trailer

0 cranes
Crane-free deployment by the operating crew

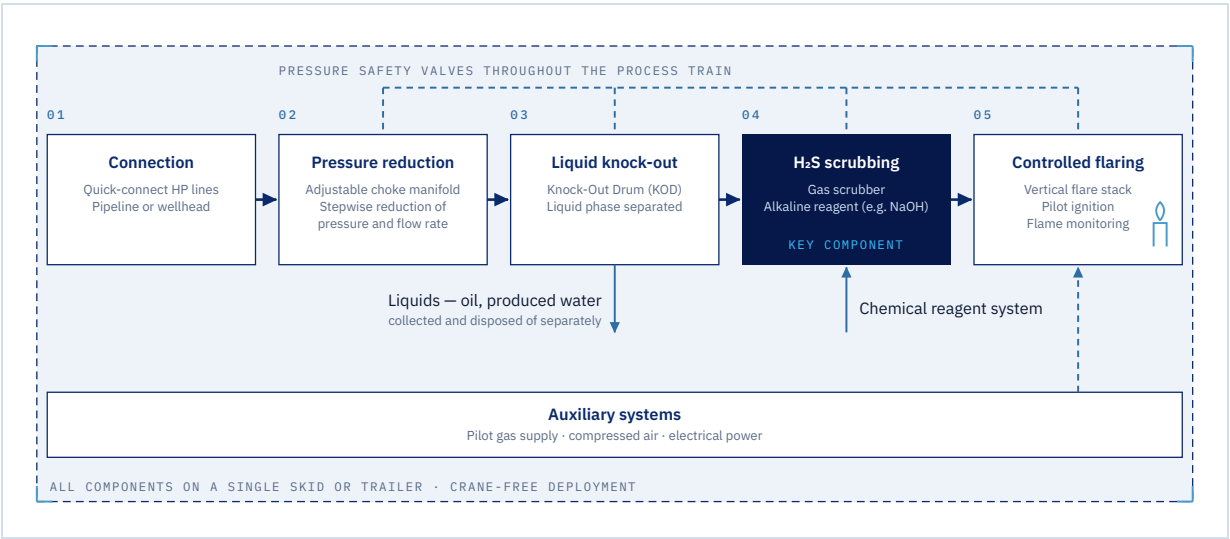
01 · OVERVIEW

The Mobile Pressure Bleed-Off System is a modular, trailer-mounted unit that consolidates all equipment required for controlled gas depressurisation and flaring into a single transportable skid. It is designed for deployment at remote field locations where fixed infrastructure is unavailable and crane access is impractical, enabling rapid setup and teardown by the operating crew without additional lifting equipment.

The system's key technical differentiator versus conventional mobile flaring units is the integration of a dedicated H_2S gas scrubber into the process sequence. Installed downstream of the liquid knockout drum and upstream of the flare stack, the scrubber chemically binds hydrogen sulphide from the gas stream — using an alkaline reagent — before combustion, substantially reducing toxic emissions to atmosphere. This makes the system suitable for sour-gas environments where conventional flaring equipment would generate unacceptable H_2S emissions, or where local regulations require scrubbing prior to flare.

The modular layout of all components on a single skid or trailer allows assembly directly at the point of use with no cranes, achieving fast deployment and demobilisation. The system is suited to planned maintenance bleed-off operations, pipeline commissioning and decommissioning, emergency pressure relief, and any temporary operation requiring controlled gas disposal under high-pressure or sour-gas conditions.

02 · HOW IT WORKS — PROCESS SEQUENCE



01

Connection

Quick-connect high-pressure lines are attached to the pipeline or wellhead. High-pressure flexible lines allow connection without alignment modifications to existing infrastructure.

02

Pressure reduction

Gas passes through an adjustable choke manifold that provides regulated, stepwise reduction of pressure and flow rate to safe operating levels for downstream equipment.

03

Liquid knock-out

The gas stream enters a Knock-Out Drum (KOD) that separates the liquid phase — oil and produced water — from the gas before it continues downstream. Liquid is collected and disposed of separately.

04

H_2S scrubbing

The gas scrubber — the key differentiating component of this system — removes hydrogen sulphide through chemical reaction with an alkaline solution (e.g. NaOH or similar reagent). This step substantially reduces toxic H_2S concentration in the combustion gas, lowering atmospheric emissions and protecting personnel.

05

Controlled flaring

Cleaned gas is burned on a vertical flare stack equipped with pilot ignition and continuous flame monitoring. The system confirms stable combustion before and during the bleed-off operation.

SYSTEM COMPONENTS

- Vertical flare stack with flare tip and ignition system
- Adjustable choke manifold for regulated pressure and flowrate reduction
- Quick-connect high-pressure lines for connection to pipeline or wellhead
- Knock-Out Drum (KOD) for liquid phase separation from gas stream
- H_2S gas scrubber with chemical reagent system — distinguishing feature vs. conventional mobile flaring units
- Pilot ignition and flame monitoring system
- Auxiliary systems: pilot gas supply, compressed air distribution, electrical power supply

— All components mounted on a single skid or trailer for crane-free deployment

03 · KEY FEATURES AND ADVANTAGES

Safety and compliance

— Integrated H_2S scrubber — handles sour gas safely; reduces toxic atmospheric emissions
— Pilot ignition with continuous flame monitoring — confirms stable combustion throughout operation
— Pressure safety valves throughout the process train
— Designed for high-pressure and sour-gas environments

Operational advantages

— Fully modular on single skid or trailer — no crane required for deployment
— Rapid self-deployment and demobilisation at remote locations
— Quick-connect high-pressure connections — no permanent tie-in required
— Suitable for planned, emergency, and temporary operations

04 · APPLICATIONS

— Pipeline maintenance, repair, and commissioning — controlled bleed-off of trapped gas before opening sections
— Wellhead pressure relief — safe depressurisation prior to intervention or workover
— Emergency pressure relief on pipelines or wellheads with sour gas content
— Temporary production operations requiring controlled flaring without fixed infrastructure
— Remote field locations where crane access and permanent installation are not available
— Any operation where H_2S scrubbing prior to flaring is required by regulation or HSE standards

> TAKEAWAY
>
> Where conventional mobile flaring equipment cannot safely handle sour gas, the Mobile Pressure Bleed-Off System consolidates pressure reduction, liquid knockout, H_2S scrubbing, and controlled flaring into a single crane-free, trailer-mounted unit — with no cranes, no fixed infrastructure, and no permanent tie-ins required.