

ASN-15 ZHD 'LOADING ARMS' MEASURING SYSTEM



S-14ZHD-K Loading standpipe
with a telescopic nozzle



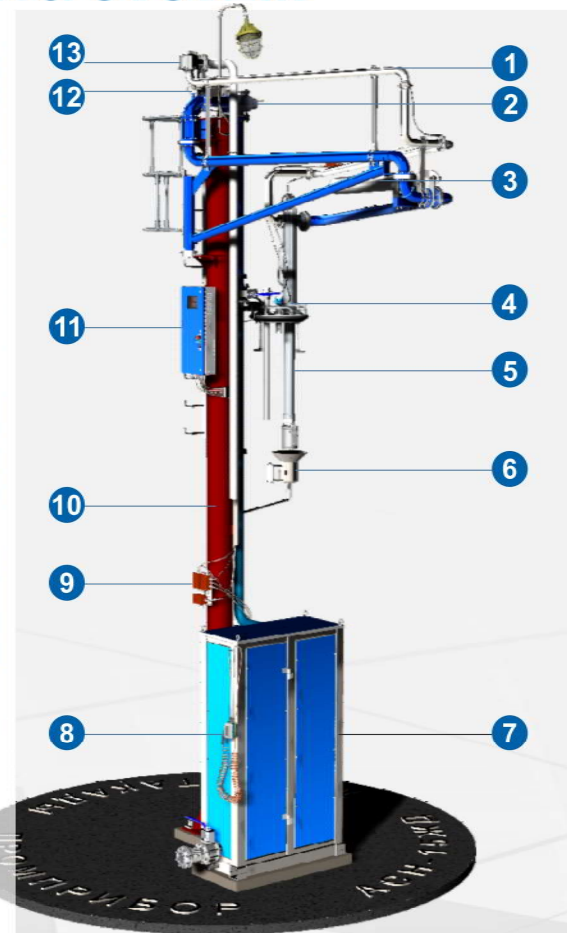
Measuring unit
(loaded product metering
in mass units)

CUSTOMER'S TRADE MARK OEM PRODUCTION FEATURE IS AVAILABLE

ASN-15 ZHD Measuring system is designed for the metered top loading of nonaggressive low viscous oil products and other fluids into the rail cars with the feature of product fiscal metering in volume or mass units. This loading/measuring skid is completed with the flowmeters, pumping skids, loading standpipes, automation system with a field controller, executing data transfer to the automation system's upper level.

Loading process is performed through the rail car top manhole by means of S-14ZHD-K Loading standpipe with a telescopic nozzle, tightly adjoined to the filler, due to which it's possible to vent out the air-vapor mixture, occurring during the loading process implementation. S-14ZHD-K design includes the following complete units: cut-off type control valve, hinged pipeline, loading nozzle with a pressure sealing cover, operation (current) level gauge, maximum level gauge, loading arm mounting rack.

In order to implement two or more products loading through a single standpipe, ASN skid is completed with the manifold and optional measuring units. The following components are provided in the measuring unit configuration: manually or remote controlled entry valve, fast maintainable variable fineness gas filter separator (with no risk of product spillage), check valve, mass metering unit. These units are mounted into the individual module, ensured with the appropriate ingress protection rating. There are provided protection enclosures with the function of primary units' electrical heating and an independently hydraulically operated valve – with regard to the case of viscous product loading.

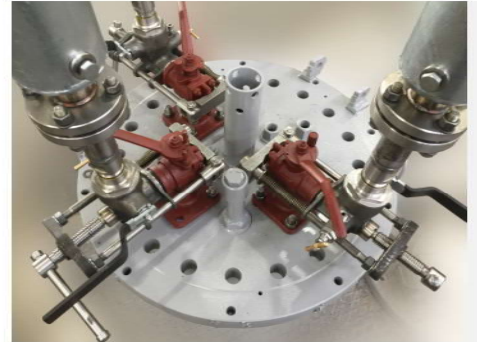


- 1 Vapor vent hose
- 2 Cut-off valve
- 3 Loading arm
- 4 Loading arm storage position unit
- 5 Loading nozzle
- 6 Permanent drip pot
- 7 Measuring unit
- 8 'Omega' grounding device
- 9 Junction boxes
- 10 Loading standpipe column
- 11 ASN Distributed regulation system's control cabinet
- 12 Air valve
- 13 Vapor vent unit

ASN-15 ZHD MEASURING SYSTEM



Coaxial loading arm for liquefied gas hermetic loading under pressure

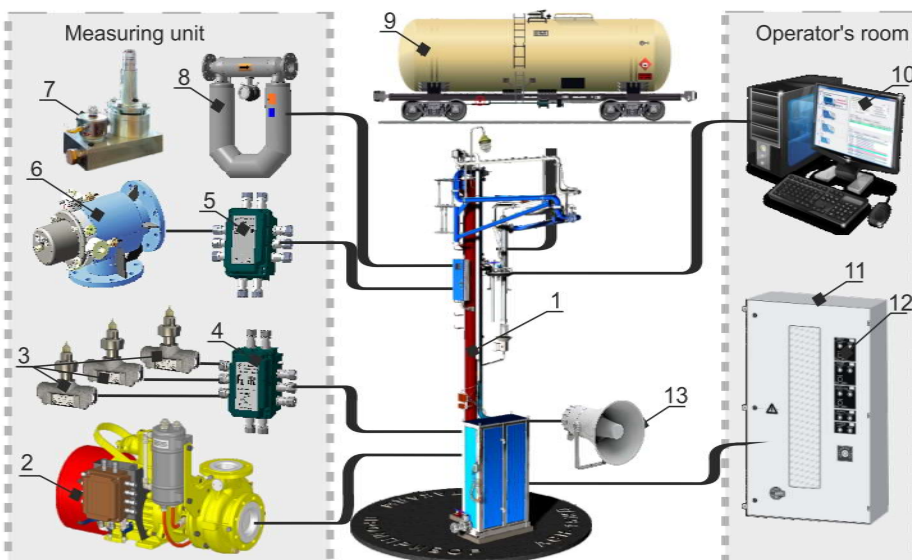


Coaxial type loading arm design includes the following complete units:

- manually or automatic operated shut-off valves with regard to the liquids and gases;
- coaxial hinged loading arm (gas pipeline is installed within the liquid product pipeline);
- connection joints to the rail car valves, supplied in a single complete set with the ball cut-off valves

ASN-15ZHD 'Loading arms' measuring skid can be completed with the coaxial type loading arms for liquefied gas hermetic loading under pressure.

ASN-15ZHD measuring skid is fitted with the unified system of centralized and local control, including a single arm's loading process operation field controller, responsible for the overfill sensors operation, product dispensed amount set-up, rail car grounding, loading start/stop button actuation, cut-off control valve operation, loading rack central control station communication, receiving and execution of emergency and permission command signals.



Control system that ensures centralized and local control

Nº	Value
1.	ASN-15ZHD Measuring skid
2.	Pumping skid
3.	Sensors
4.	Input unit
5.	Valve control unit
6.	Product flow cut-off (control type) valve
7.	Additive dosing unit
8.	Mass flowmeter
9.	Rail car
10.	Loading process operator workstation (APM)
11.	Control cabinet
12.	Pumping unit command controller
13.	Loud speaker communication