

Multiphase Desander Cyclone Solids-Separation Technology

Applications Oil & Gas, Petrochemical, Power Plants, Water Industry

Uncontrolled sand production poses a major problem for oil & gas operators. It costs operators billion of dollars in loss of production and high facilities maintenance costs .

The risk of production loss can be eliminated by installing a continuous sand/solid separation system. This can be applied near the source of sand production i.e. at wellhead or upstream of production separator vessel.

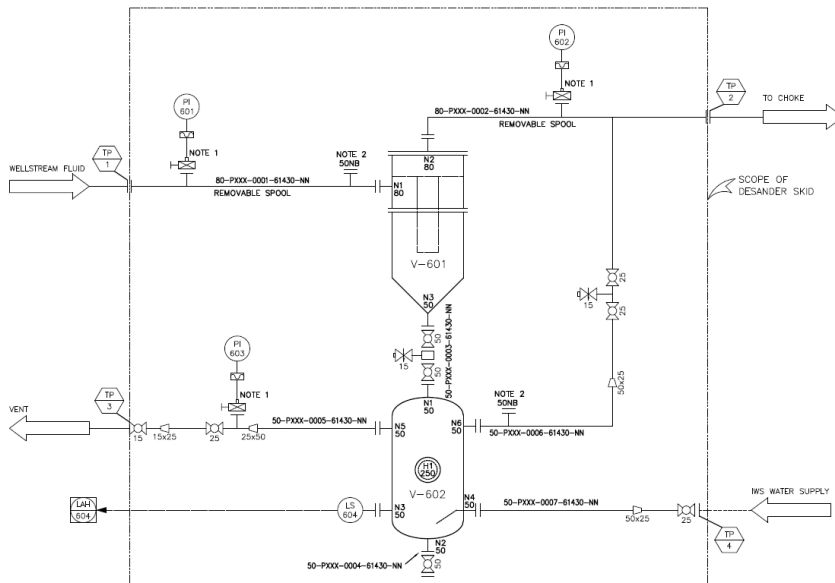
Removing these solids at or near the wellhead (upstream of the process facilities) offers a number of advantages:

- Protects equipment from erosion damage
- Prevents solids build up in vessels and pipelines
- Prevents sand damaging valve seats
- Overall risk reduction to on production
- Reduces the need for vessel entry

The **ProDesander** Cyclone solids-separation package removes sand from multi-phase well streams applicable for all gas liquid ratios from 100% liquid to 100% gas. The **ProDesander** are engineered to ensure maximum operating envelope and separation efficiency.



Desander Package



Desander Package Process Flow Diagram

Design Basis:

- Solids Production Rate (size range and concentration)
- Required Separation Quality (micron)
- Temperature & Viscosity of fluids
- Liquid, Solids & Gas Density
- Flow Rates of the well stream
- Allowable Pressure Drop

Typical Design (Rental Unit):

- ANSI 900# (2000 psi)
- Liquid Rate: 0 to 5,000 BLPD
- Gas Rate: 0.5 to 3.0 MMSCFD
- Sand Production – no limit
- Max Allowable Pressure Drop - 2 bar
- Solid Collection Capacity - 250 kg

ProDesander



KEY FEATURES

Small footprint less than 2m (W) x 2m (L) x 5m (H)

Clearance from 2000 µm down to 10 µm with 90% separation efficiency

Cleaving action on pass minimizing hydrocarbon content in solids (Sand Washing)

Wax and emulsion compatible

Designed to industry standards ASME VIII Div I, ANSI and NACE

No moving parts – minimum maintenance

Minimal system pressure loss ≤ 2bar

Designed to handle slugs, upsets and high solid loading

Skid mounted and modular for flexibility and easy transportation, lifting, installation and maintenance

High grade liners – low maintenance

Proven & Effective Desander System – more than 40 units installed in the region

Instrumentation for continuous monitoring

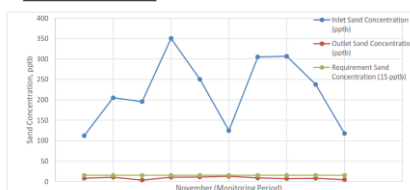
Available for short and long term rental or customized engineered solution

ProDesander Applications:

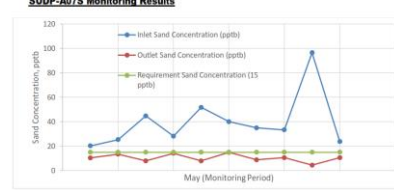
- Production enhancement
- Frac Sand/Proppant removal
- Well clean-up operations
- Well start-up operations
- Under-balanced drilling
- Sand washing and treatment

Performance Monitoring Results

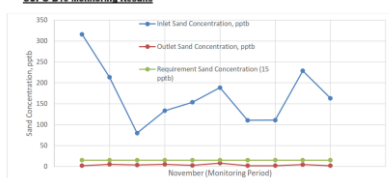
SUPG-B17 Monitoring Results



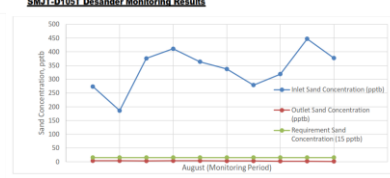
SUDP-A078 Monitoring Results



SUPG-B15 Monitoring Results



SMJT-D1057 Desander Monitoring Results



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