



# Experience The Benefits

Precision Acoustic Sand Monitoring & Flowmeter Services  
for Optimised Performance

INCREASED WELL PERFORMANCE

ENHANCED SAFETY

COST REDUCTION

MORE THAN

21

YEARS

EXPERIENCE



3

Regional Hubs – UK,  
Malaysia, UAE



30+

Operators Worked with  
Worldwide



10000+

Sensors Installed in The Oil  
and Gas Industry



**Sense.**

Our dynamic technology redefines how sensory information is realised, combining state-of-the-art hardware, intelligent realtime data and secure global connectivity.



**Understand.**

We analyse integrated data using SMART software to provide award-winning visualisation, reporting and understanding – creating a truly interactive, immersive experience.



**Perform.**

We exceed expectation, provide trusted insight and make a genuine difference to our clients' operational performance – supporting informed decision-making and maximising value.

We serve a diverse customer base consisting of Independent and National Oil Companies, plus Well Service Companies across more than 23 countries in our core regions of the North Sea, Africa, Southeast Asia, and the Middle East.



## **SMS TRULY CONTRIBUTES TO THE OPERATIONAL SUCCESS OF OUR CLIENTS, MAKING A TANGIBLE DIFFERENCE.**

SMS has established a strong reputation for providing unique and effective strategies for monitoring and managing sand at surface. Our suite of Sand Management and Erosion-Corrosion products and services includes Sand Management Studies, Acoustic Sand Monitoring, Sand Sampling, Erosion & Corrosion Probes, Erosion Modelling, and Real-Time UT Wall Thickness Systems.

Our team is committed to driving our clients' operational efficiency by offering a comprehensive range of low-carbon solutions and leveraging our zero-manpower capabilities, which have been demonstrated to minimize carbon footprint and accelerate the path to net-zero.

Through the adoption of groundbreaking technologies and partnerships with multiple clients and industry players, we have experienced rapid growth over the years, facilitating the transition to a safer, more robust, resilient, cost-effective, and sustainable asset life cycle.

**Sense. Understand.Perform**

# Industry Sectors



## Renewable Energy

- Integrity & Offshore Services



## Erosion & Corrosion Management

- Erosion Sand Monitoring
- Corrosion Monitoring
- Sand Management Strategy



## Marine

- Integrity Services
- Manpower & Equipment



## Midstream & Downstream

- Integrity Services
- Manpower & Equipment



## Upstream

- Well Services
- Manpower & Equipment



## Subsea

- Sand Monitoring

# Market Segments

## Upstream

Exploration, production, well test and, decommissioning

## Midstream

FPSO and terminals

## Downstream

Refinery and blending plants

# SAND SERVICE APPLICATIONS

## Maximum Sand Free Rate

Determine sand free hydrocarbon production rates with acoustic sand detectors or sand samplers

## Well Testing

Supporting operators and service companies monitor solids and erosion during well test or well unloading in real-time

## Maximum Allowable Sand Rates

Determine acceptable production of sand to the surface that is within handling and erosion limits

## Particle Size Analysis

Conduct sand sampling and obtain Particle Size Distribution data in real-time

## Erosion Modelling

Predict erosion due to sand production to aid in flowline and pipeline design or to prevent LOPC

## EPIC

Integrate sand and erosion-corrosion systems into existing client DCS for continuous monitoring

## Downhole Integrity

Instantaneously detect failure of downhole sand control systems or formation rock failure

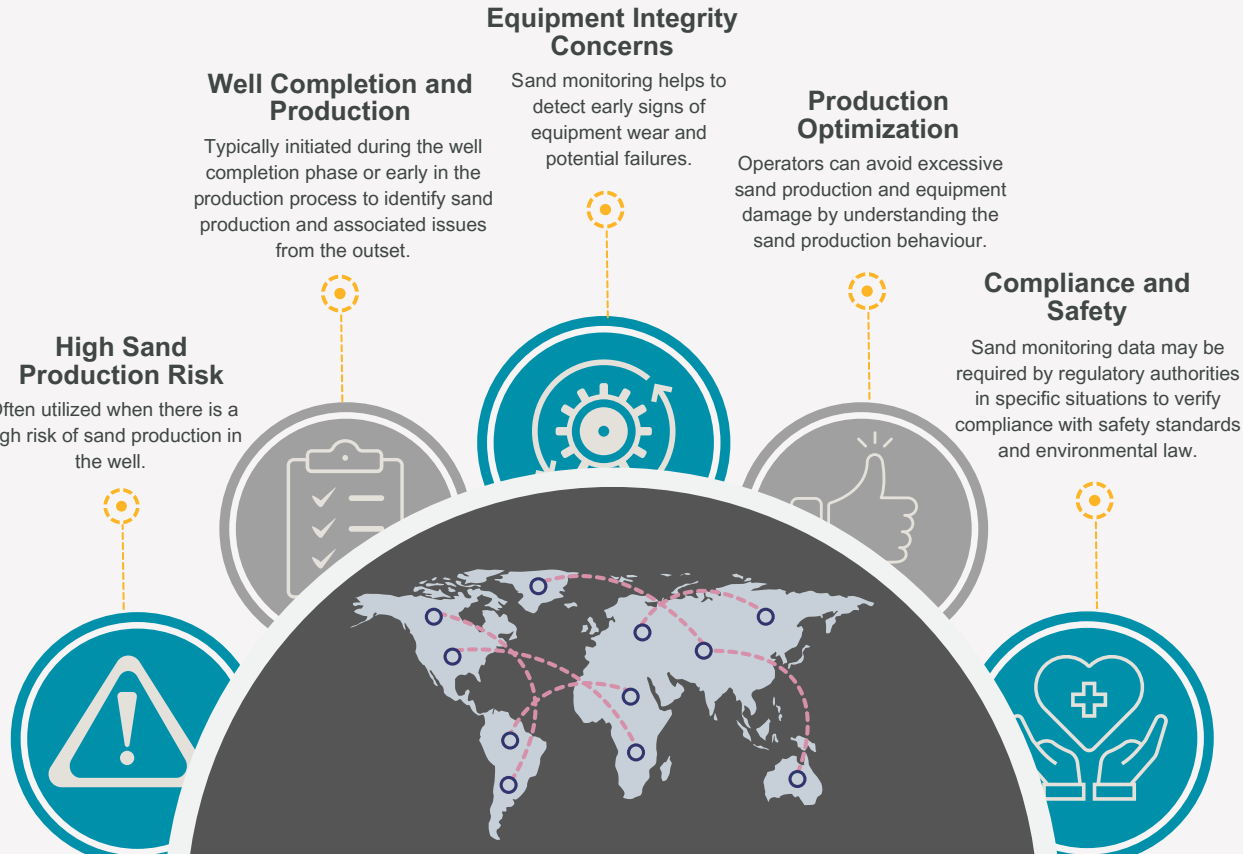
## Handling and Separation Efficiency

Monitor efficiency of separators and wellhead or bulk desanders as well as deposition in flowlines and pipelines



# WHEN DO YOU NEED SAND SERVICES?

The existence of sand production during oil and gas extraction is the fundamental requirement for using sand monitoring services. When reservoir formations contain unconsolidated sand particles that can be mobilised and moved along with the hydrocarbons during production, sand production occurs.



# SAND MONITORING

Over time, the presence of sand can lead to equipment and plant damage on a platform. If left unaddressed, it can even result in loss of primary containment, creating a potential risk of explosion and serious injury. Sand erosion can also lead to reduced efficiency, downtime, and lower production in all cases.

To detect the unseen deterioration caused by sand erosion, sensors are essential for monitoring hidden damage and providing real-time data. With quick identification of sand presence, adjustments in production can be made, maintenance reduced, and potential equipment damage minimized.

Accurate monitoring, analysis, and interpretation of real-time data can prolong asset longevity and reduce costly repairs, replacements, and downtime.



# SAND MONITORING SERVICES



## Acoustic Sand Monitoring (ASM)

- Non-intrusive design, ideal for HPHT / sour gas application
- Provides an instantaneous response to sand production
- Simple, cost effective and fully portable system



## Ultrasonic Flowmeter

- Precise bidirectional and highly dynamic flow measurement with the non-invasive clamp-on technology
- High precision at fast and slow flow rates, high temperature and zero-point stability
- Portable, easy-to-use flow transmitter with 2 flow channels, multiple inputs/outputs, an integrated data logger with a serial interface



# UNDERSTANDING THE TECHNOLOGY

Converting raw data from the acoustic sand detector into a **quantitative value** enables precise measurement of sand production volume, improving the accuracy of integrity evaluations.

By combining Acoustic Sand Monitoring with a flowmeter, operators can **determine the Sand Rate** in grams per second (g/s). This helps **track trends and assess the severity of sand production**.

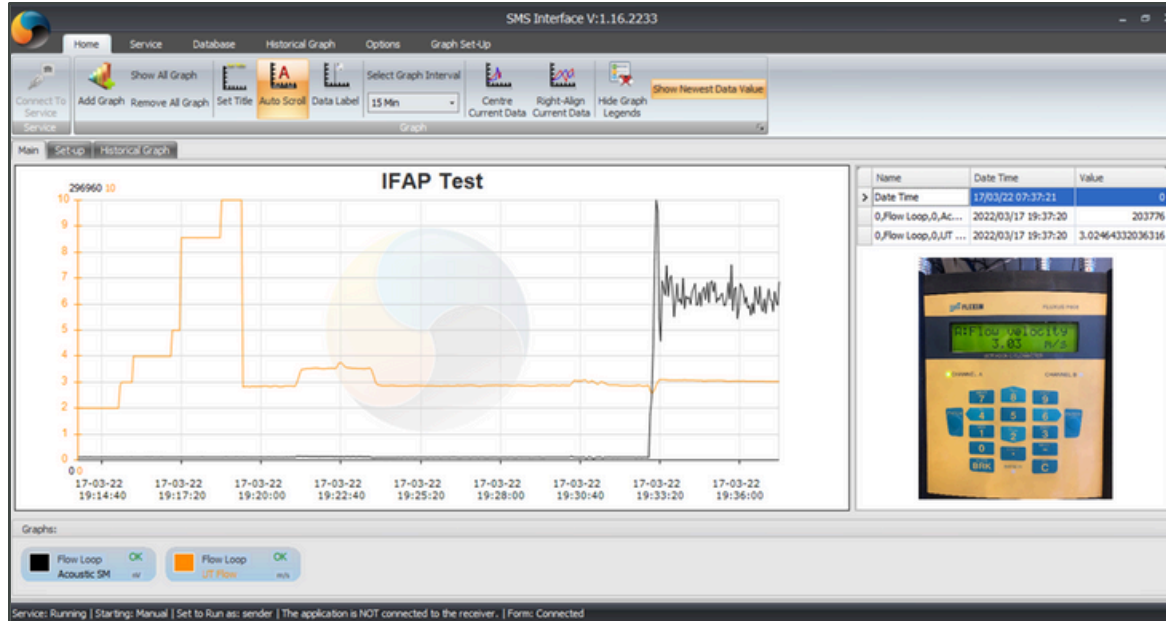
Additionally, the data can be used to **model and predict erosion rates** in pipelines and flowlines, supporting:

1. Conceptual design and FEED stage – Providing input for early-stage planning.
2. Operational decision-making – Assisting asset engineers in managing well performance throughout its lifecycle.
  - P-Tech and Operations Engineers – Optimising well operations, such as beaming up wells.
  - MC&I and Pipeline Engineers – Planning maintenance and mitigating erosion risks.

Name	Sand Produced (kg/d)	Velocity (m/s)	Erosion Rate (m/year)	Show Used Values	Theoretical Limits	Calculate/Marked	Remove Calculation
SMS Well #1_1_70	36.40	7.67	0.000	Show	Max Velocity: 9.20	Marked	Remove
SMS Well #1_1_70	36.40	4.67	0.000	Show	Max Velocity: 4.67	Marked	Remove



# UNDERSTANDING THE TECHNOLOGY



Flow velocity is a key parameter for sand injection calibration, making the portable UT flowmeter a valuable tool in supporting calibration campaigns.

# ADDITIONAL SERVICES

SMS is dedicated to providing top-notch services and outstanding customer support, at competitive prices. We prioritize reliability, efficiency and affordability to ensure that our customers always receive the best value for sand management.

## 1 Installation, Maintenance & Troubleshooting

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At SMS, we take pride in providing exceptional service to our valued clients, ensuring the operational integrity of their systems while helping to keep them in optimal condition. Our highly trained field engineers are passionate about ensuring the successful installation and operation of your system while meeting the necessary regulatory standards. We understand that supplying high-quality products is only part of the equation, which is why we also offer tailored maintenance programs and troubleshooting services to optimize the life and reliability of your system. With our support available both on-site and remotely, you can have peace of mind knowing that we're here to help you every step of the way - no matter where you are in the world.

## 2 Training

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We recognised that every client has unique needs, which is why we offer flexible alternatives to tailor our services to match your requirements. Our convenient training programs are designed to help you get the most out of our solutions and maximize your return. Our team is dedicated to ensuring that you have the support and resources you need to succeed, and we are always available to help you find the perfect training solution to meet your specific needs. Contact us today to learn more about our customized services.

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