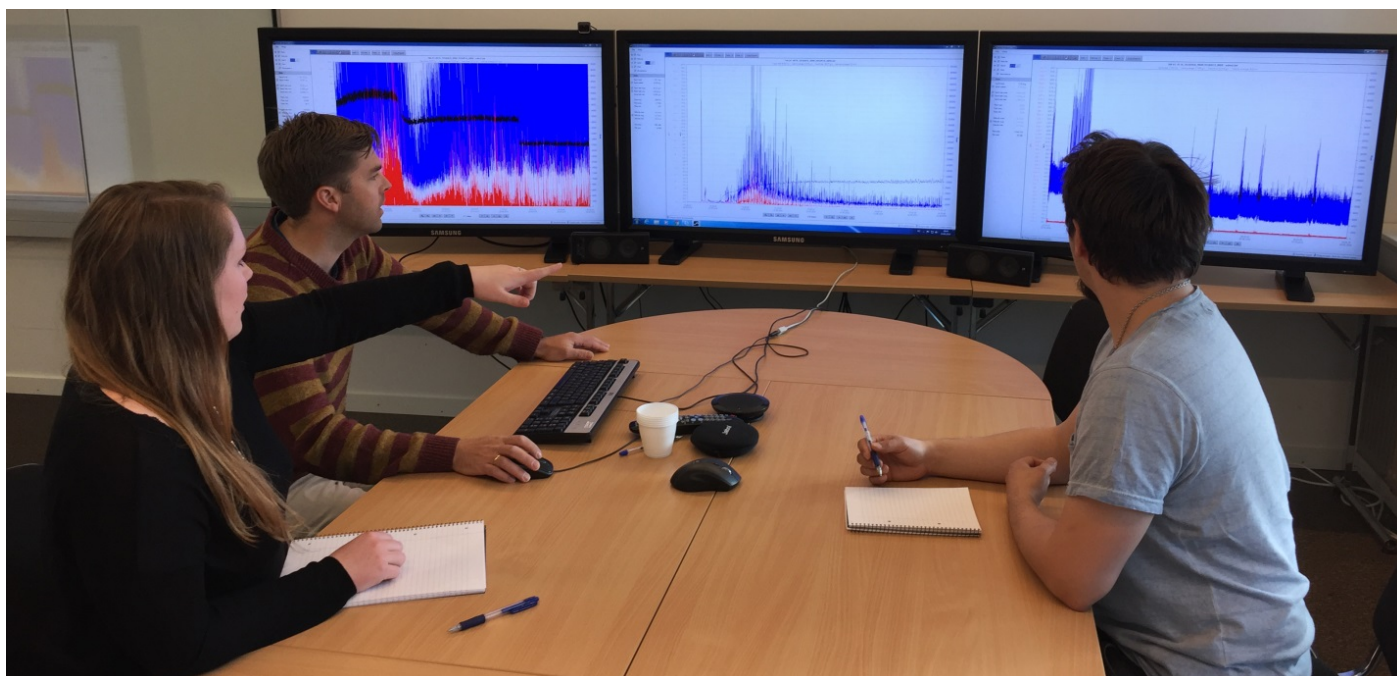


# ClampOn

## Support & Sand Management



### Advantages

- More accurate sand measurements
- Optimisation of ClampOn system
- Integral part of sand management program
- Single point of contact
- Better use of resources
- Increased production
- Increased efficiency

### Background

For more than ten years, ClampOn's highly experienced support team have been providing their sand monitoring expertise to the

world's major operators. Sand data from hundreds of wells globally are sent to the ClampOn support centre in Bergen. Most of the data are received in real-time, while some clients upload historical data to the support server.

### Why?

Sand production forces many operators to restrict wells. However, a proactive sand monitoring and sand management approach can help operators optimise oil & gas production for the given conditions, and reduce

maintenance and production downtime. Together, this means increased overall profit for clients.

***"We are the experts on our instruments, and you are the experts on how to operate your wells"***

Involving the ClampOn support team in your sand management program frees up your own resources for other tasks.

## Objective

Our objective is to be the technological leader in providing reliable sensors and sand monitoring expertise to clients all over the world. When sand is detected, the client's concern should be how to handle it, not how to quantify it.

***"Leave sand monitoring to ClampOn, so the operator can focus on managing sand production"***

Sand monitoring and sand management is simple when there is no sand production. However, when there *is* sand production, it can be challenging and frustrating; mistakes can be dangerous and extremely expensive.



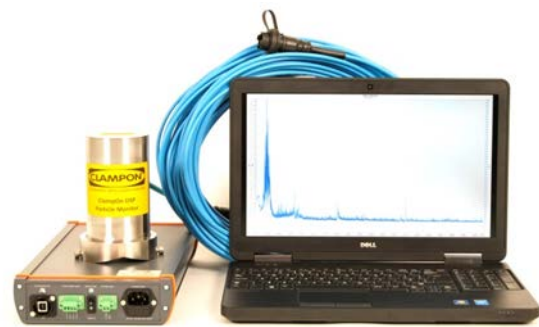
*Example of too much sand being produced*

## Our support services

### System maintenance

ClampOn recommends maintaining the sand monitoring system at regular intervals. With the ClampOn support team at your back, we ensure that your system is well maintained.

Offshore installations are complex, sometimes requiring more than a basic set-up. Therefore, a variety of versatile and customizable software is available to our clients in order to ensure accurate live auto-calculated sand rate, integrated directly into the client's Central Control System.



*ClampOn Sand Monitor Rental System*

### Sand analysis

Sand analysis has many challenges, such as unstable production, low flow velocities and production of fines. These more complicated scenarios may require human interaction, which is where ClampOn's years of experience of day-to-day monitoring comes in. Our expertise ensures that the operator's data are correct and that operations are as safe as possible. Data are formatted into customized weekly, monthly or quarterly reports, which typically include detailed information about sand production for each well, statistics showing long-term trends and total sand production. They also detail the technical condition of the system, and any need to service, calibrate or update system parameters. A revised table of calibration parameters can be provided. Depending on the system and procedures, the revised configuration files can be directly uploaded to the ClampOn system.

### Support availability

The ClampOn support team is available to our clients 24/7. Modern communication networks allow our support engineers to remotely assist our clients all over the world. From our offices in Bergen and Houston, our engineers have assisted clients with:

- Bean-up operations
- Startups
- Well tests
- Well stimulation
- ASR tests – acceptable sand rate
- Troubleshooting

