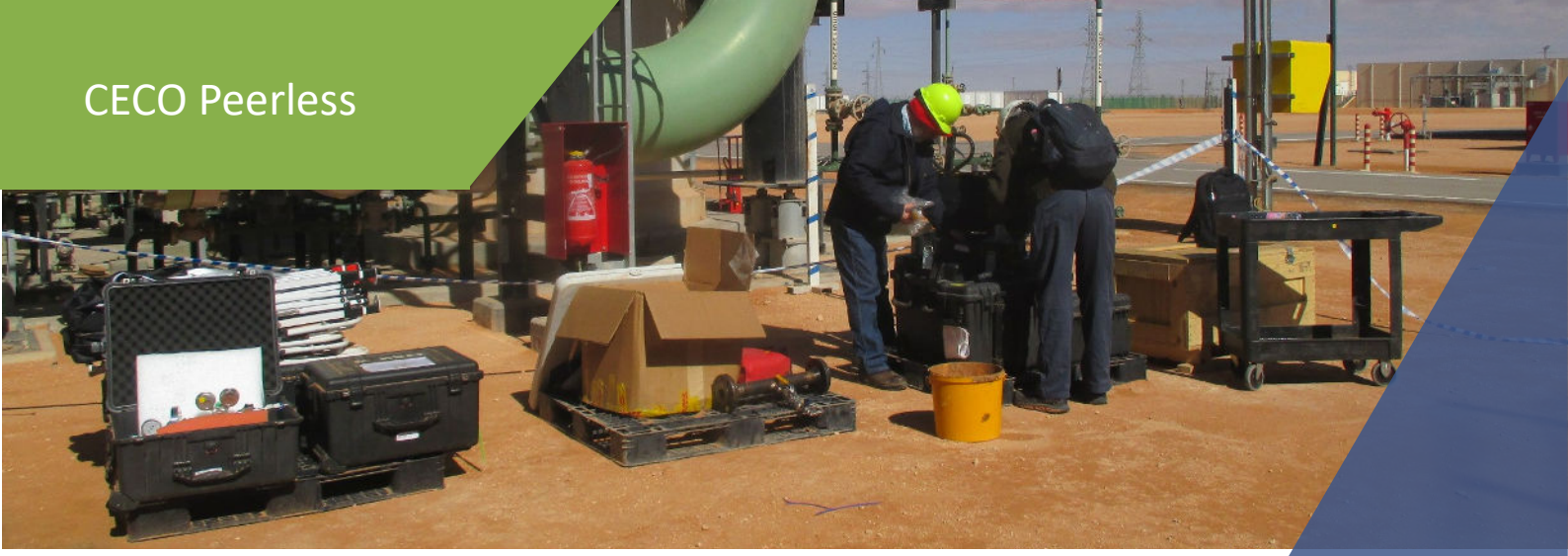


Field Service | Process Diagnostics | CSP

Compact Sampling Probe

Field Sampling

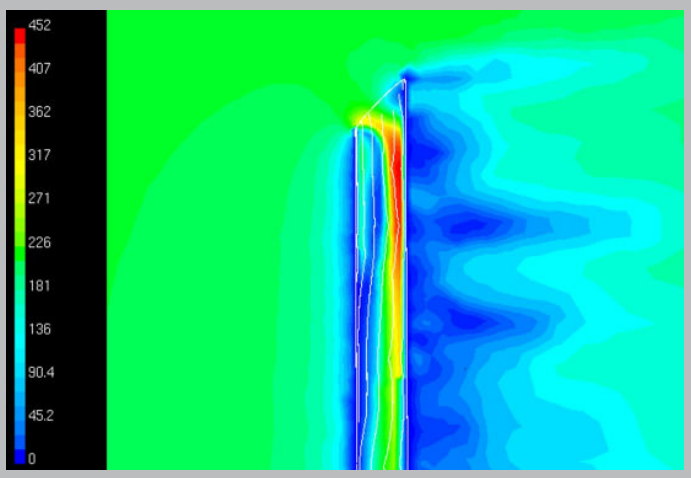
CECO Peerless has developed a field sampling tool for pressurized gas streams. The Compact Sampling Probe (CSP) was created, custom-designed and built to Peerless' specifications to collect and weigh entrained liquids and solids both up and downstream of separators or filters with very high system operating pressures.

The CSP system offers in-line field sampling of pressurized gas from vessels or piping connections to obtain quantitative liquid and solid content measurements at the sampling locations.

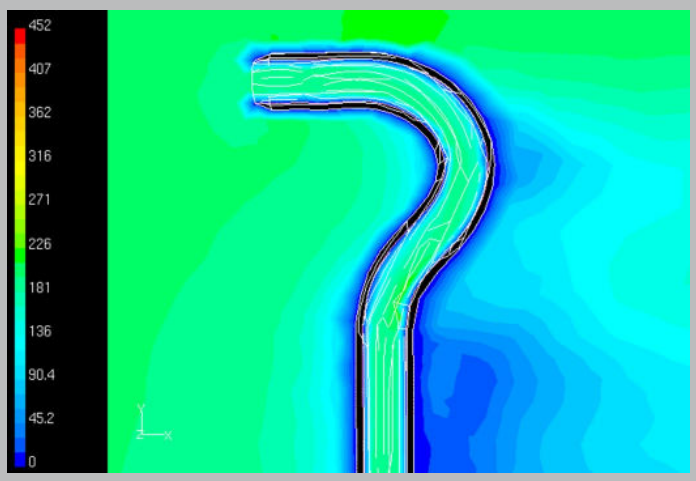
The CSP utilizes a gravimetric method, where high efficiency coalescer are installed in a portable Peerless equipment panel to collect all entrained liquid droplets and solid particles within the sampled gas.

In addition, if requested, it is also possible to measure and report solid particle size distributions.

These results can be used to determine the optimum separation/filtration technology for the application or assess existing equipment's performance and efficiency.



Red color indicates inefficient measurement of sample properties due to inconsistent distribution.



Isokinetic probe design shows uniform distribution of sample improving measurement accuracy.

Isokinetic Sampling

Isokinetic sampling is necessary to avoid enriching or leaning of the gas with aerosols, droplets, or particles. Some testing services use a syringe-style probe. This type of probe can draw a very lean sample by missing most particles above 5 microns in diameter, resulting in serious misrepresentations of both mass concentration and mass efficiency of separation. A single 10 micron droplet is 1000 times more massive than a 1 micron droplet. Isokinetic sampling avoids such bias.

Technology Advantage

- Isokinetic probe tip allows for extracting a representative sample
- Testing performed at operating conditions matches the process
- Troubleshoot the issues that cause downtime in separation / filtration equipment