

# Performance



## MATTERS™

### Offshore Wellhead Production Choke

Shell BRENT "C" Platform

**CCI was able to increase the life of the Shell Brent choke valves by an average of 12x over the single stage trim that was being used.**

When the customer came to CCI they were getting an average of 2 weeks life out of their choke valves. This was due to the extreme vibration and erosion damage (trim and body) caused by high fluid velocity and erosive particles.

#### Operating Conditions:

- Inlet pressure – 270 bar (3900 psi)
- Pressure drop – 235 bar (3400 psi)
- Flow rates – 4 kg/s gas, 45 kg/s liquid

#### Issues with the original valves:

- Vibration that led to packing failures
- Erosion of body and trim
- Poor control as result of the erosion

**Consequences:** High maintenance costs, lost production and potential EH&S issues.



Competitor's single stage trim after less than a week

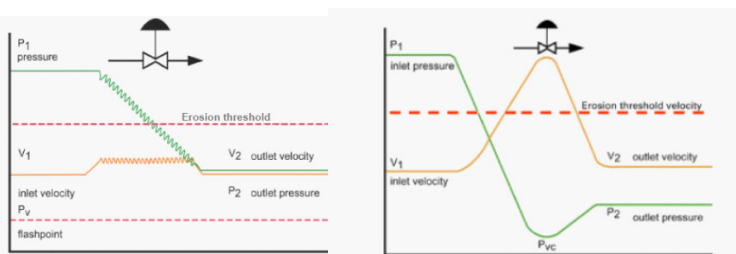


CCI DRAG trim after 12+ weeks

**Solution:** With a CCI DRAG choke, valve life went from an average of 2 weeks to an average of 6 months, greatly reducing Shell's costs

#### How long are your chokes lasting?

DRAG® velocity control technology decreases erosion by as much as 150% and increases service life by more than 500%.



Multi-stage pressure drop

Single-stage pressure drop

#### The CCI DRAG advantage

CCI's DRAG® technology controls flowing velocities throughout the valve trim by forcing the process fluid to follow a tortuous path of right angle turns. The resistance to flow provided by these turns (or stages) limits the trim exit velocity to a safe level, regardless of the pressure drop.

The 100DPC's utilizes tungsten carbide with DRAG technology which reduces the velocity of erosive particles in the fluid stream. Erosion is a function of velocity squared, therefore by reducing the particle velocity DRAG is able to dramatically increase the erosion resistance of the valve.

