After trying a variety of different pumps, Clariant turned to CheckPoint Pumps & Systems to devise a reliable method for dosing their highly effective but challenging drag reducing agent. The chemical was extremely sensitive to ambient temperature, with viscosity varying from 500 - 2000 centipoise (5 – 20 poise). Compounding the challenge, the chemical would often congeal into lumps within the IBC storage tanks, making it nearly impossible to even get it into the pump suction, much less filter.

CheckPoint added a double-diaphragm pump to pre-charge the suction side of a CheckPoint Series 8400 pneumatic process pump. This setup demonstrated continuous and reliable flow of 53 USG/H (200 L/H) at 5,400 PSIG (372 BARG) discharge pressure.

The production package contained both pumps within a 316 SS stainless steel framework, and included an electronic flow meter at the discharge point, with readout as instantaneous flow rate and totalized. The system has been in service 24/7 since April 2004 under the harsh offshore conditions of the North Sea.

**Drag Reducing Agent (DRA)**
- Multiple competitor pumps had failed within hours
- Variable viscosity
- Extreme temperature conditions