



“The separator performed beautifully. It was very nice to see a smooth start-up and the blowdown separator working according to design.”



CASE STUDY: Blowdown Steam Separator

LOCATION: Western Canada

INDUSTRY: SAGD oil production

THE SITUATION: An oil production facility needed to modify a steam blow-down separator to remove entrained oil from the vented steam.

THE CHALLENGE: The customer was experiencing an unacceptable discharge of oil mist, damaging cars in the facility parking lot. Due to the environmental emissions concerns, an improved, high-efficiency separation system was required.

THE SOLUTION: A CECO Peerless vane-type separator proved to be the ideal solution for this challenge. The design incorporated removable vane internals that can be replaced when the highly corrosive fluids eventually break down the base materials.

THE PACKAGE:

Vane-type steam separator
CFD flow modeling to re-design the inlet steam piping



THE RESULTS:

- High-efficiency separation to eliminate oil discharge
- Corrosion resistant materials
- Design for anticipated replacement of internals
- Initial site inspection and review of options with operator to assure all aspects were evaluated up front.

ENVIRONMENTAL BENEFITS: The vented steam no longer had any traces of oil residue.

THE CECO ADVANTAGE: CECO Peerless performed advanced site inspections to confirm the nature of the oil contaminants that needed to be separated. Based on this evaluation, the appropriate vane was selected and designed for periodic cleaning and eventual replacement due to the highly corrosive contaminants. CFD modeling was applied to re-design the inlet steam piping to assure proper flow distribution.

“We worked together with the customer to deliver the ideal solution for this challenge. By providing the right product we were able to maximize efficiency and improve processes.” – CECO Environmental Team

