

Analysis and simulation of de-oiling system in SAGD process

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Oil sands receive much attention as an alternative to conventional oil. Currently, development and commercial production has being actively made in Canada. For these interests, process for extracting bitumen from oil sands and researches for improving the recovery bitumen are underway. The most commonly used in-situ technology for the recovery of bitumen from oil sands is SAGD (steam assisted gravity drainage) process.

In this study, we performed a simulation of oil removal(de-oiling) process for reusing of produced water used as steam in SAGD process. In particular, we dealt with produced water composition and condition for de-oiling, theoretical characteristic for IGF(induced gas flotation) system and unit simulation method. The process simulation was performed using Aspen HYSYS. Validity of simulation results was confirmed by the comparative analysis of the actual process data.