

Effects of hexane and CO₂ as an additive on bitumen recovery from oil-sand for the high temperature and pressure steam based SAGD process.

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The effects of additive on the recovery yields of SAGD process, which is a bitumen recovery process from oil-sand, were examined. Hexane and CO₂ were used for the additive onto the system using high temperature (180 °C), pressure (8~9 bar), and purity steam generated from dual-drum type of steam generator. Although the steam only SAGD process showed low recovery rate and high cSOR, roughly 10% higher bitumen recovery rate was observed from the process of hexane-steam system, compared with the steam-only SAGD process. In addition, cSOR (cumulative Steam to Oil Ratio) value, which is a type of reflection on economic index, drops from 7.1 to 6.1, emphasizing the positive effect of hexane on SAGD process.