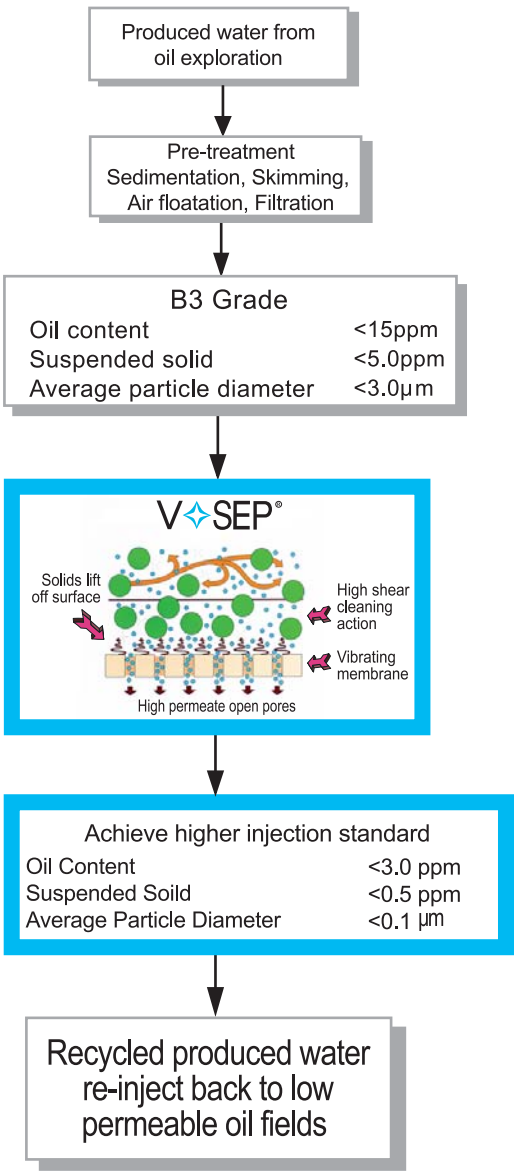
Case Study

VSEP®

Fine Filtration of Produced Water for Low Permeable Oil Field - *A1 Grade*

Different oil fields may have different level of oily wastewater. Most of the China oil fields are low grade or at low output stage. Oil-to-water ratio may be as low as 1:10. Therefore, huge amount of produced water need to be treated. At present, plenty of existing technologies can achieve discharge requirement. However, most of the oil fields face severe water shortage. They urgently require re-injection. Most of the oil fields are or soon become low permeable. Existing water treatment technologies cannot achieve China National A1 standard making re-injection difficult. VSEP, vibratory membrane filtration, can simplify existing treatment and achieve China National A1 standard. Because of small footprint, VSEP is particularly suitable for offshore oil rigs.



Features:

- Anti-fouling
- Reduce cleaning cycle
- High shear
- Higher concentration
- High flow rate
- Lower capital investment
- Small footprint
- Particular suitable for offshore oil rigs

Membrane	Ultrafiltration (UF)
Feed	Pretreated by skimming air floatation
Steady Flux	89 GFD
Operational Temperature	55°C - 75°C
Operational Pressure	Around 3 bar
Recovery Rate	80%
Cleaning Cycle	48 hours or above (depends on pre-treatment conditions)
Daily Capacity	Model i84 : 435m^3
Operational Cost	Around USD 0.7/m^3 permeate (incl. power, chemicals, water, filter pack replacement)

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