Highly Efficient and Novel Technology for Separation of Oil From Water Using Fine Screens

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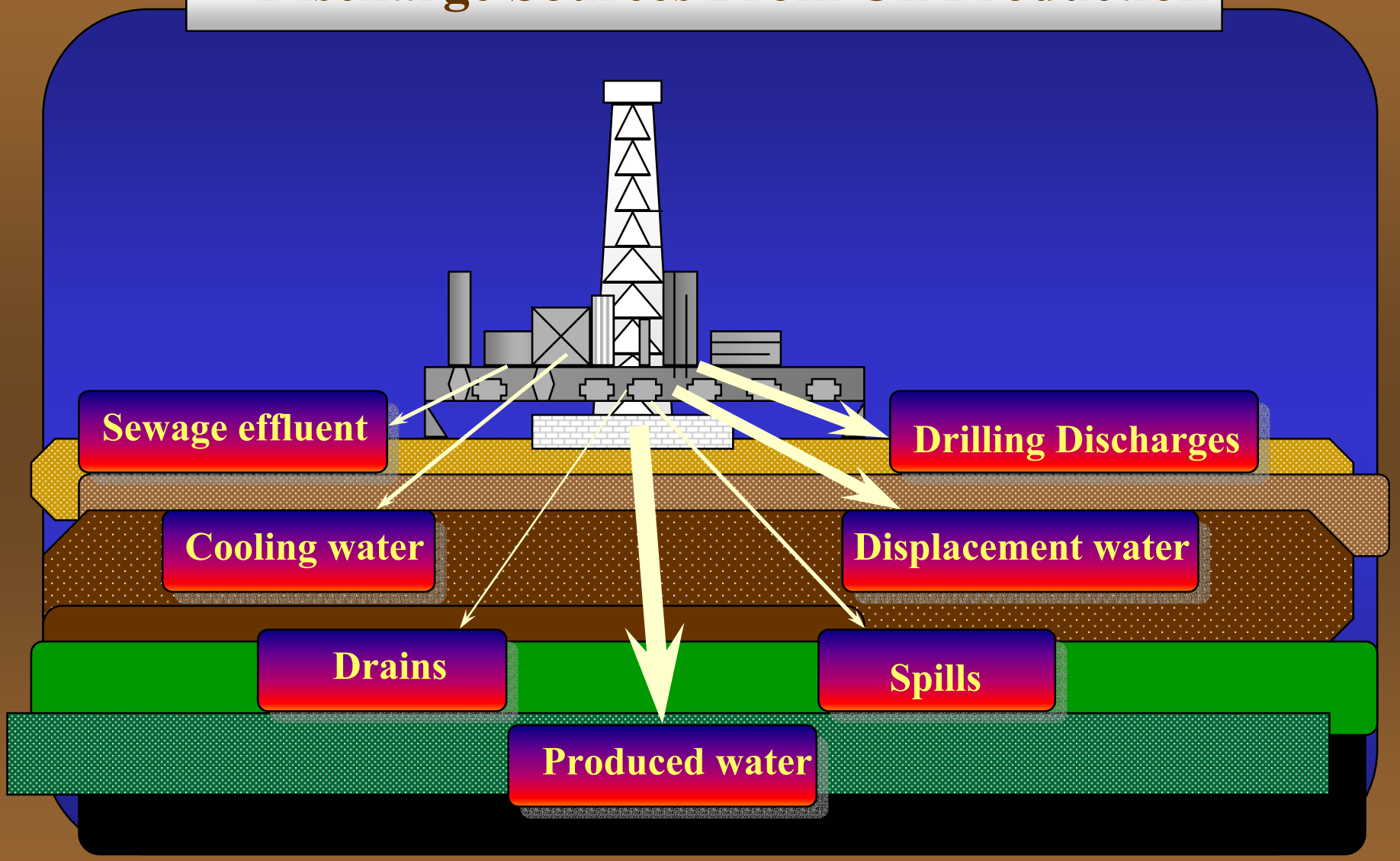
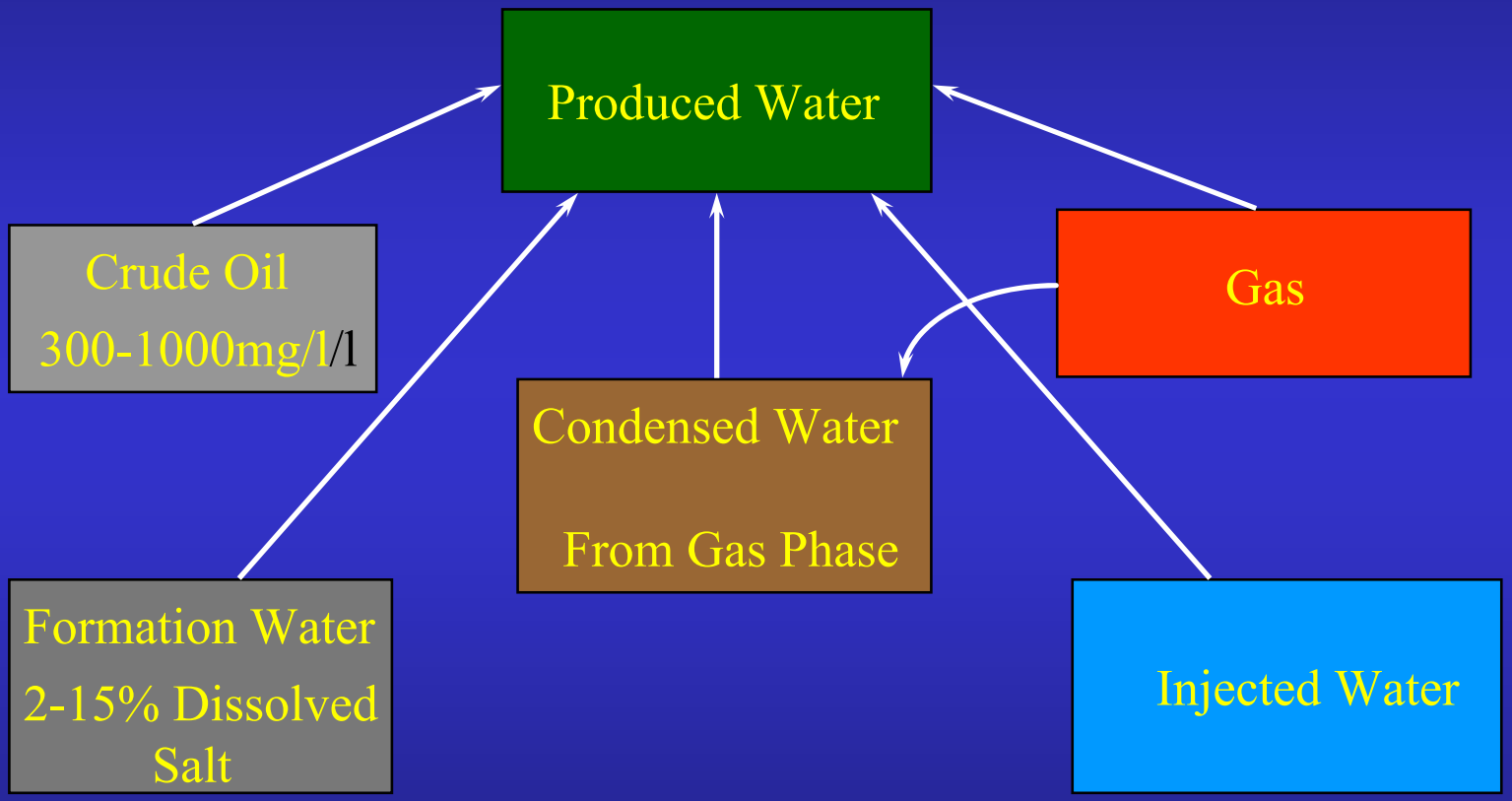
Discharge Sources From Oil Production



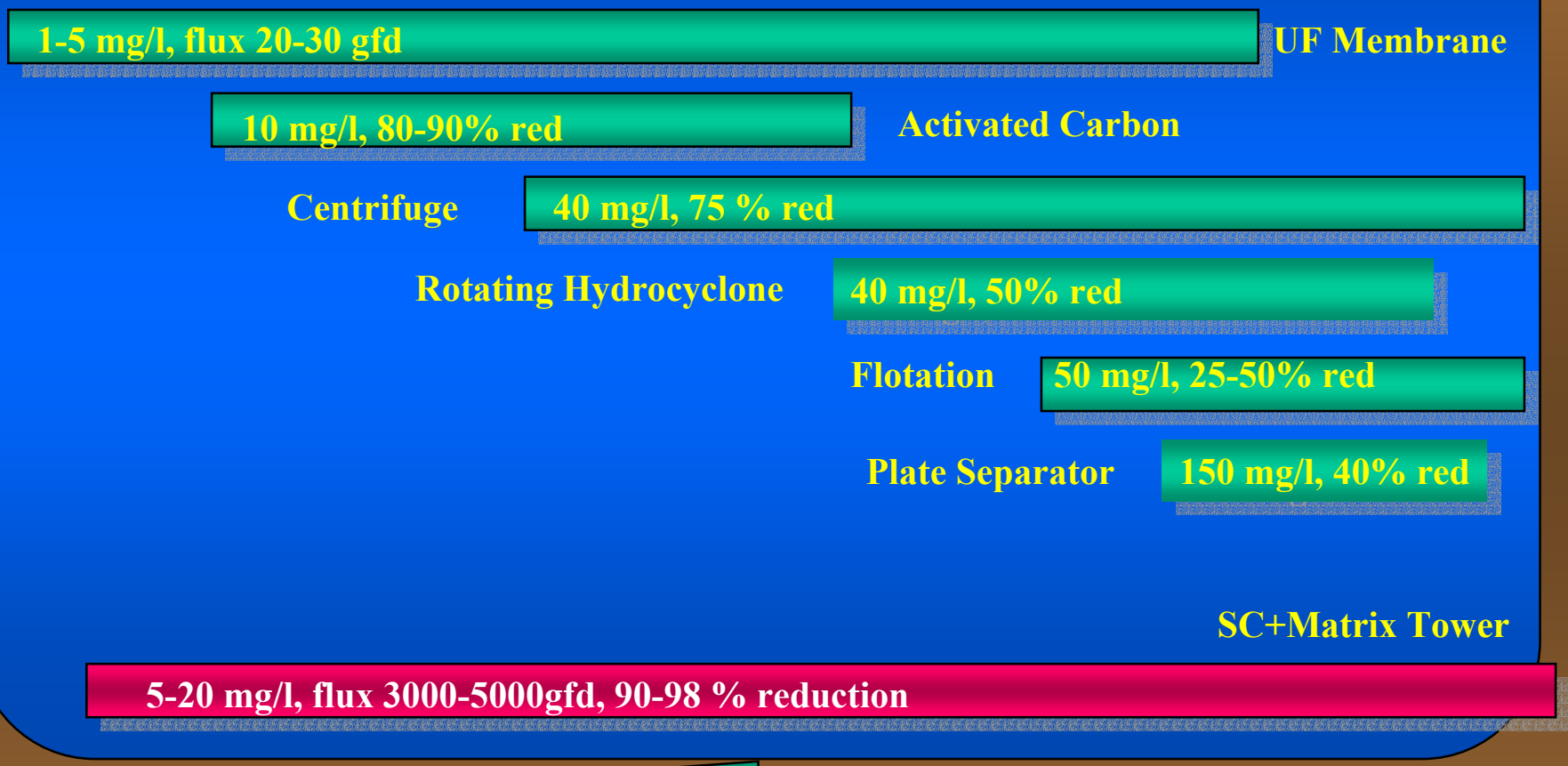
Composition of Produced Water



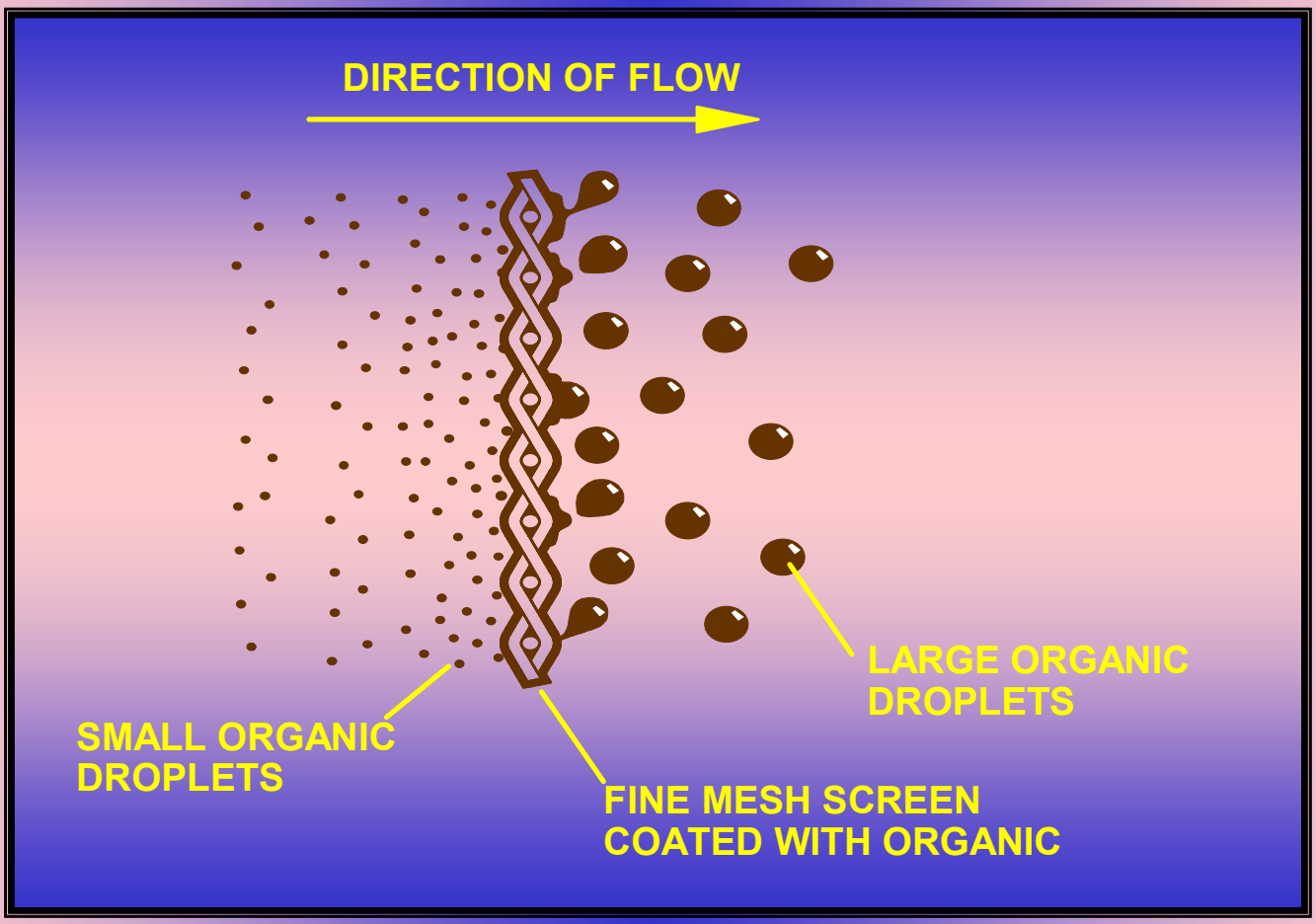
Discharge limits for produced water

- **Current discharge limit for produced water in the US is 29 mg/l**
- In 1993-95 there was a strong drive to reduce the discharge limit.
- For a short period of time the target was 7 mg/l.
- It has returned to 29m g/l due to the lack of reliable equipment yielding the 7 m g/l target.

Technology for suspended oil removal

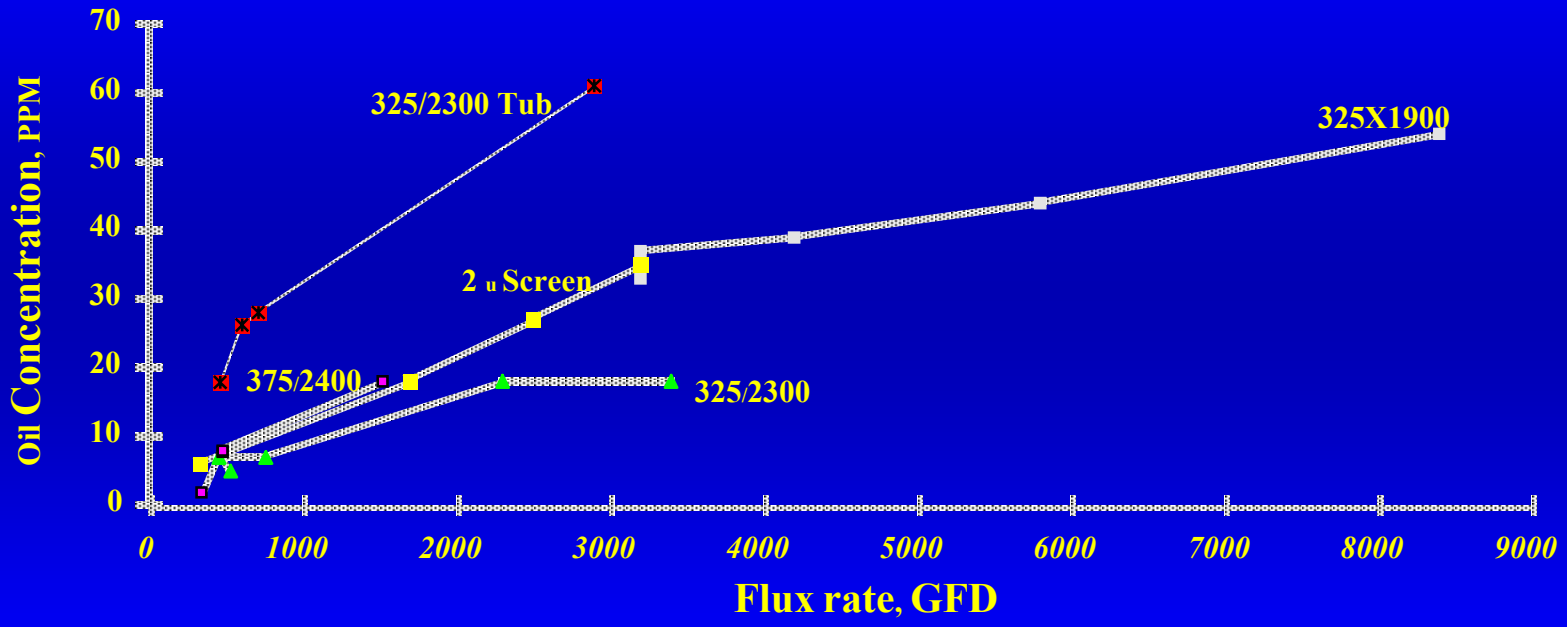


Mechanism of Coalescence

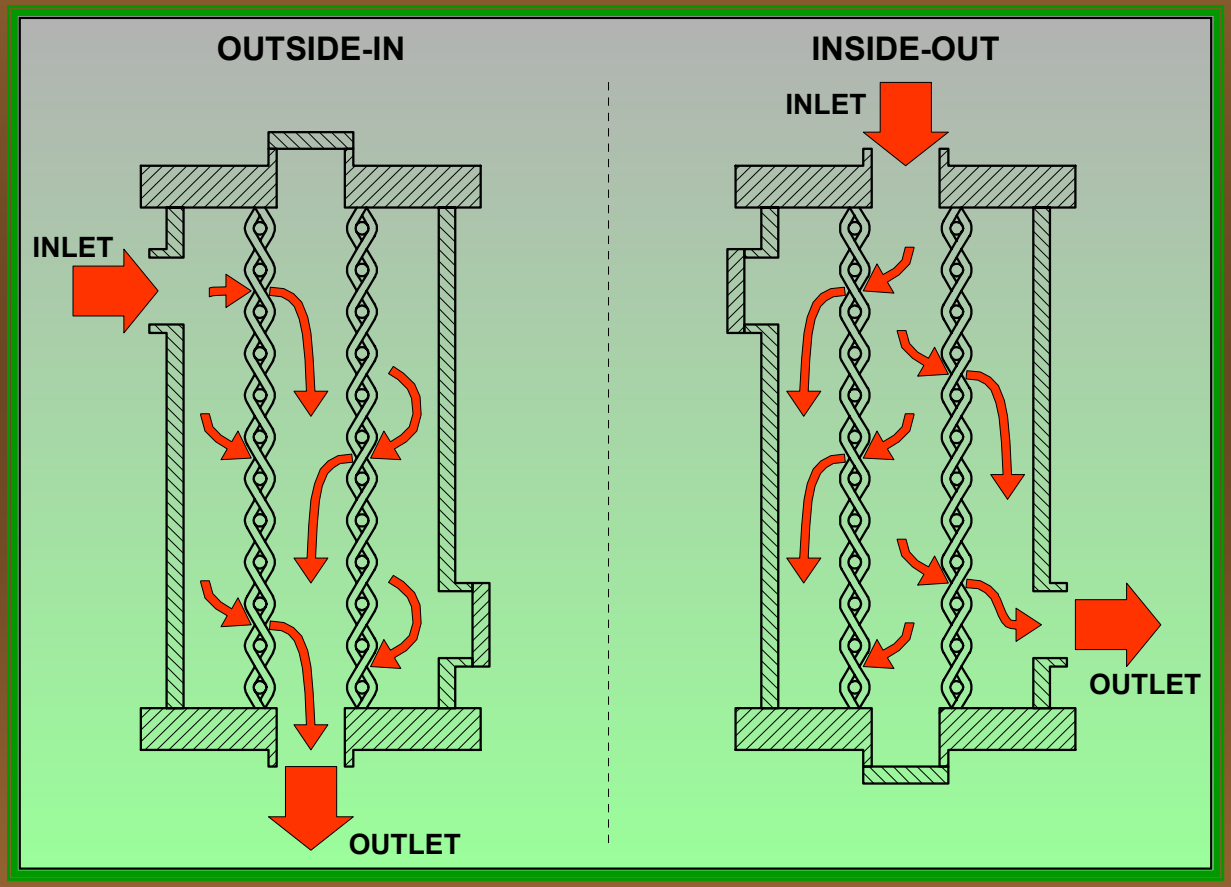


OIL CONCENTRATION VERSUS FLUX RATE FOR DIFFERENT MESH SCREENS (Cross Flow Filtration)

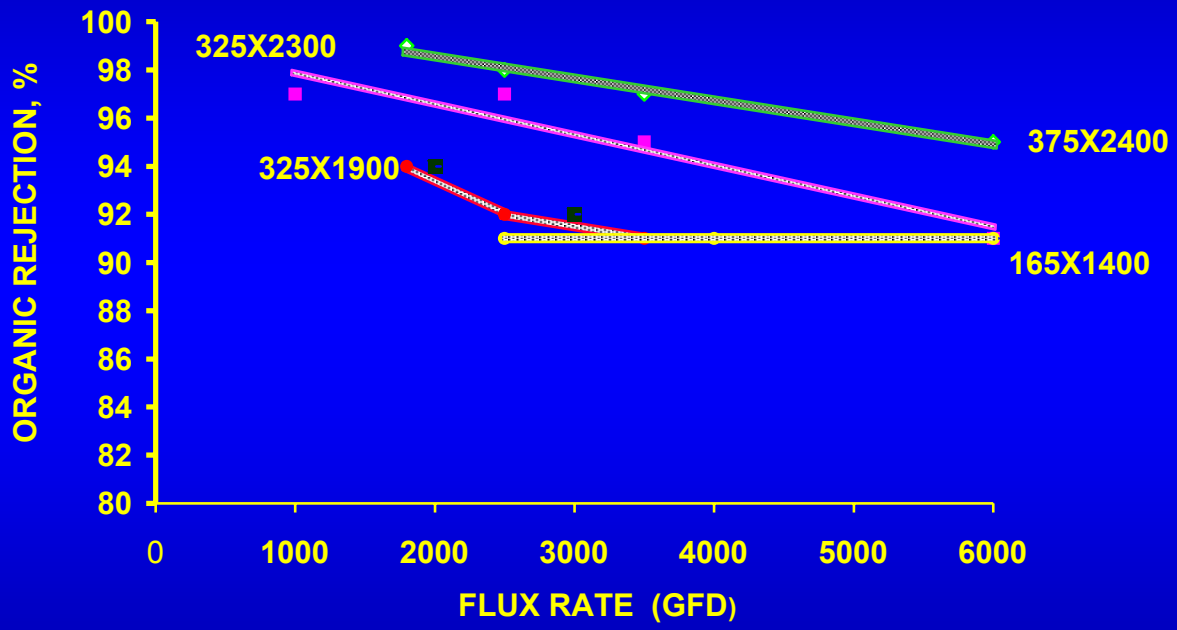
(PRODUCED WATER)



Internal Flow Path of Mesh Screen Coalescer

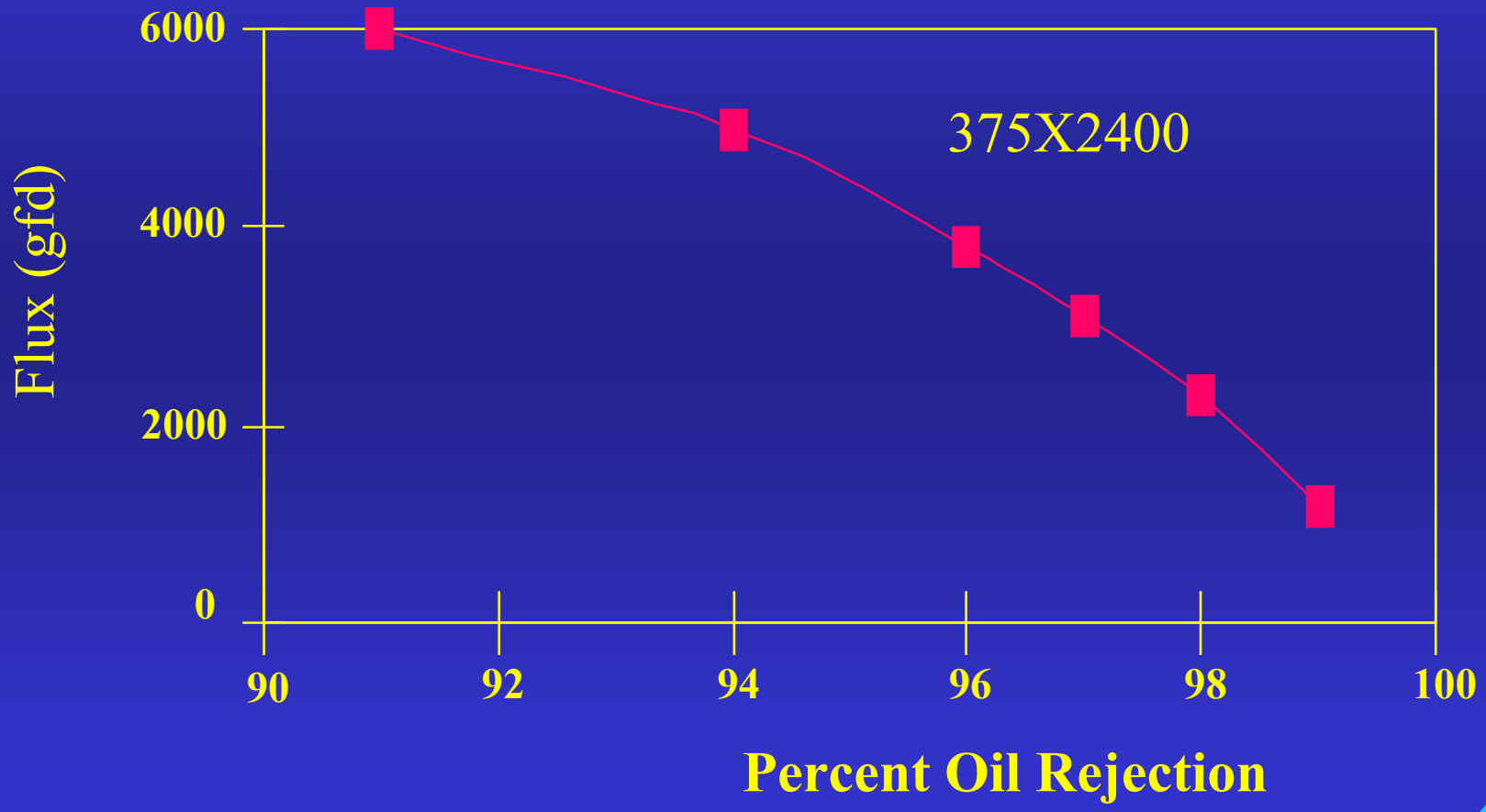


PRODUCED WATER SEPARATION USING DIFFERENT SIZES OF SS MESH SCREENS



Oil Rejection vs. Flux

(Initial Oil concentration 560Mg/L)



Flux Fluctuation and average oil concentration at the reverse flow mode

(Oil Concentration of the feed-560 mg/L)