Design Assignment (Shell & Tube HE) - 1

- Kerosene (42^o API) is required to be cooled from 110 °C to 40 °C by supplying cooling water (10^o API) stream from 33 °C to 45 °C. The maximum pressure drop of 0.7 kg/cm^2 for both streams is permissible. Design for a 1-2 shell and tube heat exchanger for this service.

- Flow rate of kerosene: $\frac{75000}{Z} + (500 \times Z)$ kg/h where Z is your group number.
- Consider 1 inch OD tubes on 1.25 inch triangular pitch, 16 ft. Length