

ENCLOSURE (B) 8

PILOT PLANT  
FOR ACETONE - BENZENE DEWAXING

by

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## ENCLOSURE (B)8

I. HISTORY

This plant was designed and built by Sendagi Seisakusho at the First Naval Fuel Depot in 1944. (See Figure 1(B)8 and 2(B)8).

II. CAPACITY

20 liters of raw material per one operation.

III. OPERATING METHOD

This plant is the three step cooling and filtering one. The mixture of acetone and benzene (acetone 60% benzene 40%) is used as solvent. Cooling is carried out by liquid ammonia. (Cooling machine has 1 cooling ton capacity)

The raw material and the solvent are mixed in the mixing vessel at 40°C to 50°C (vol 50 lit) with the solvent ratio 5:1 or 4:1. And then the mixture is transported into the filter of solution to refine (vol 200 lit at 30°C)

The mixture enters into the 1st cooler and the cooled mixture at 0°C to 10°C is transported into the 1st crystallizing vessel and then filtered by the 1st filter press through the gear pump. The 1st filtrate is transported into the 2nd cooler and cooled at -10°C to -0°C and filtered by the 2nd filter press. The 2nd filtrate is transported into the 3rd cooler and cooled at -30°C to -10°C and filtered by the 3rd filter press. At last the dewaxed oil is transported into the solvent stripping tower to separate the oil and the solvent.



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