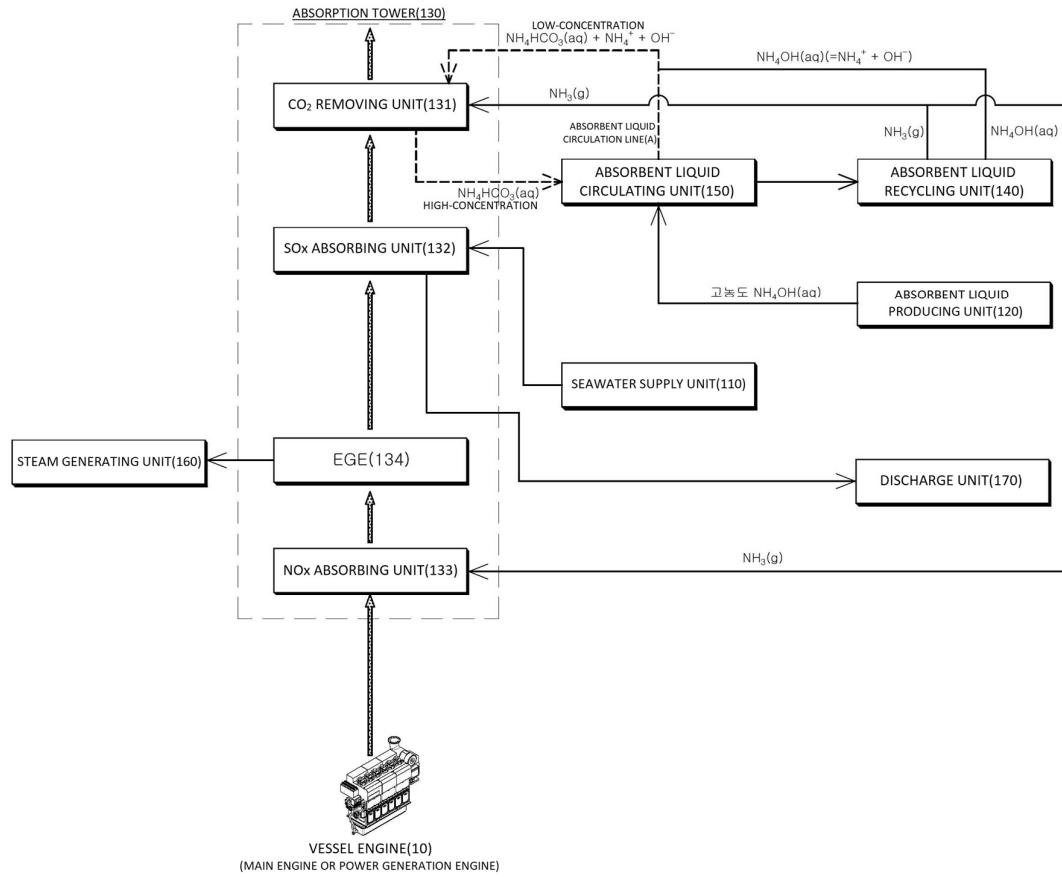
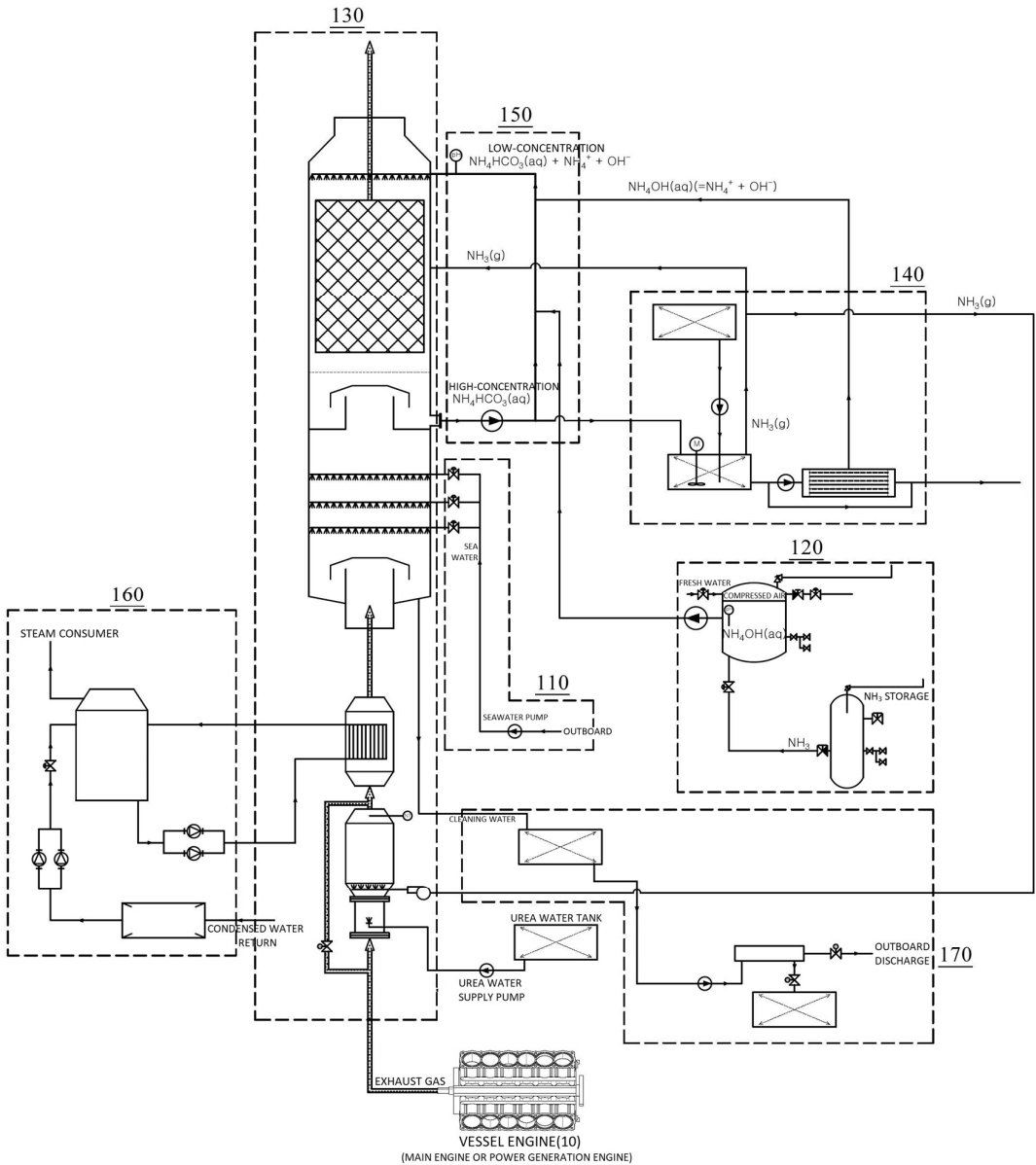


DRAWINGS

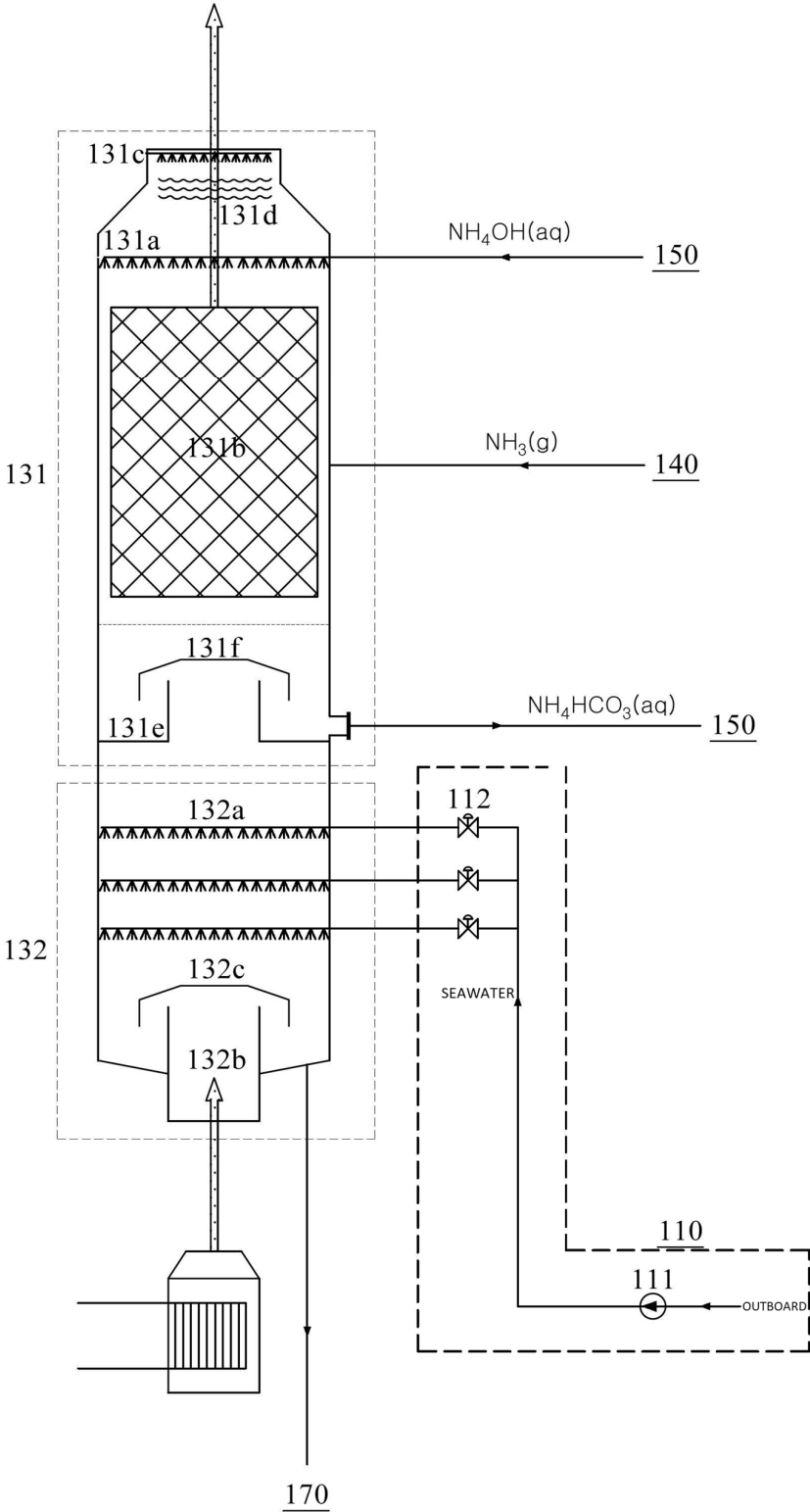
[Figure 1]



[Figure 2]

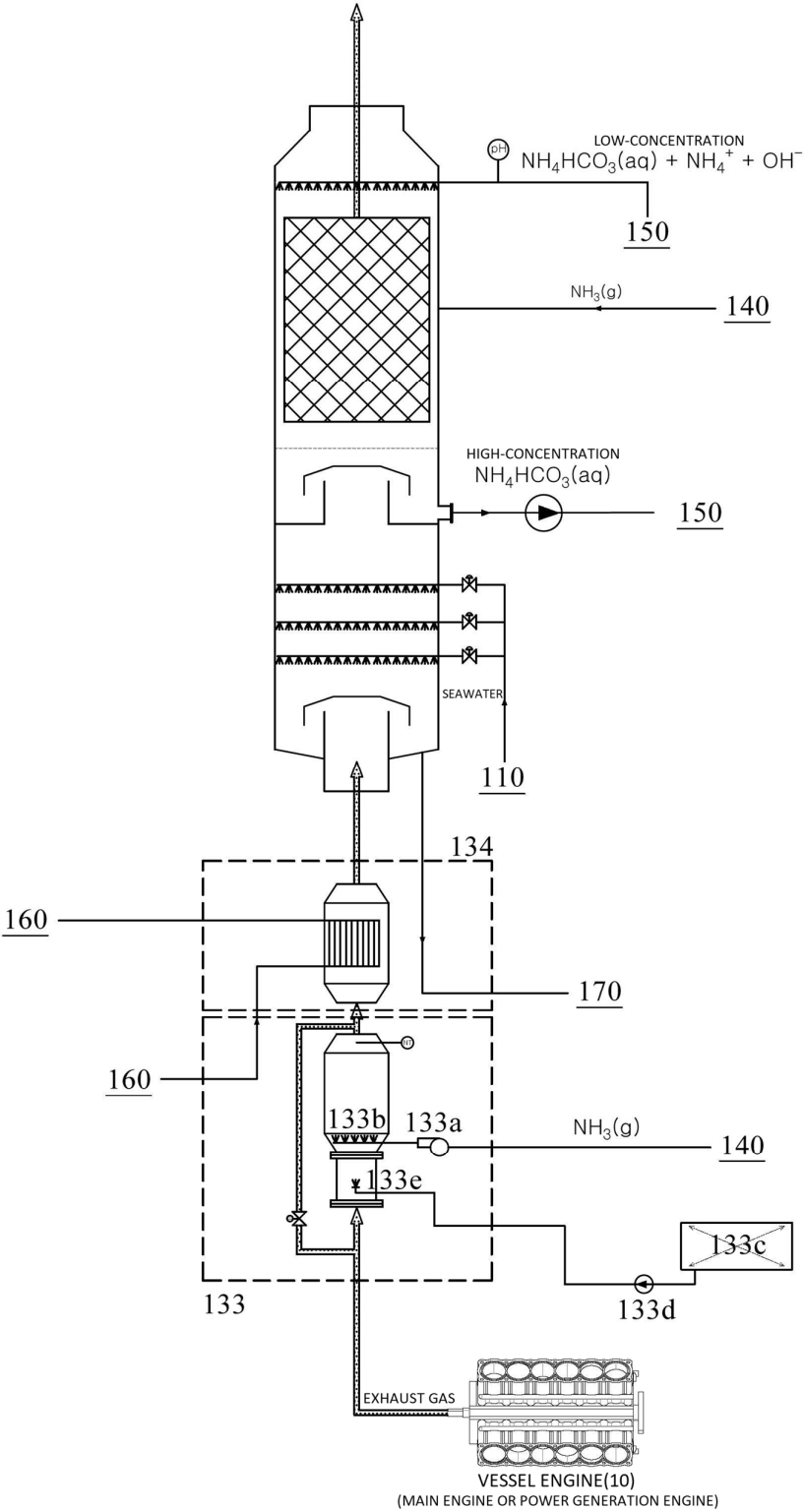


[Figure 3]

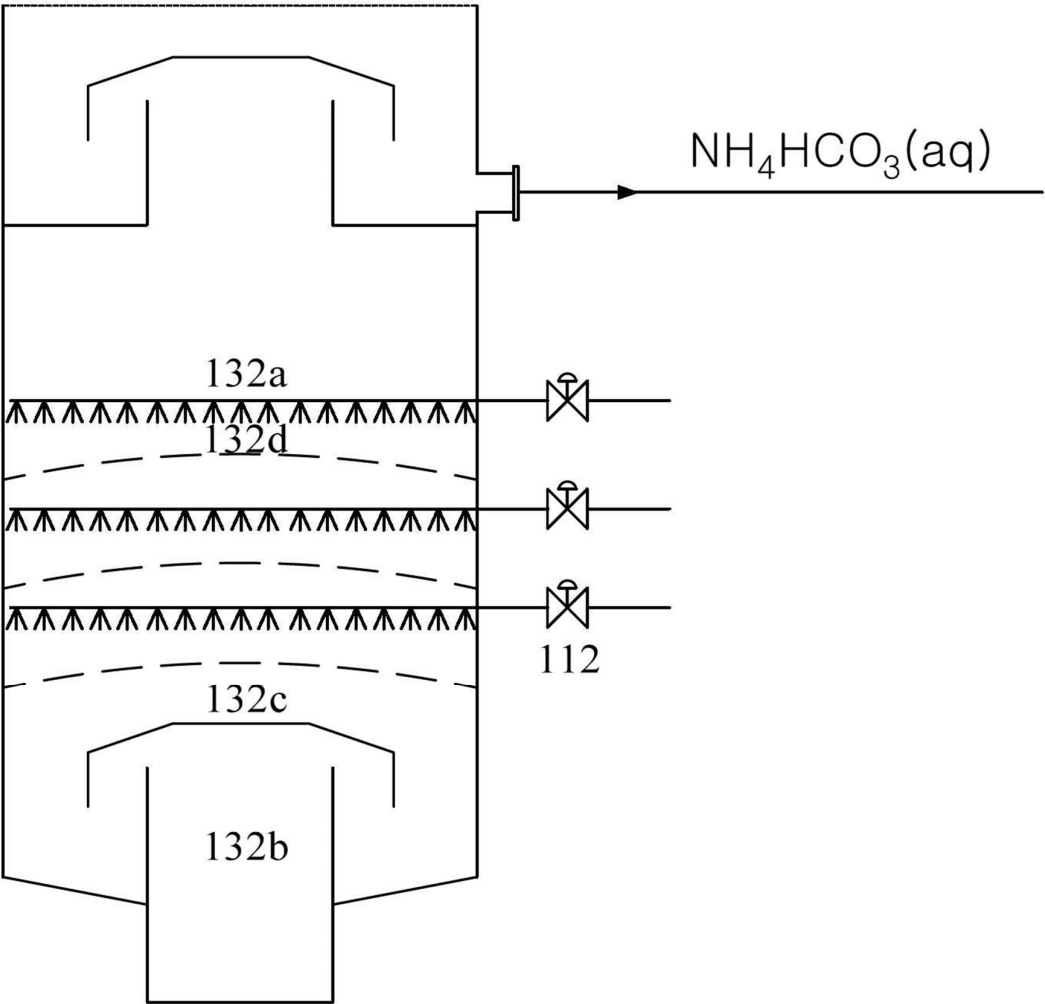


The diagram illustrates a CO₂ capture process. On the left, a gas-liquid contactor (131) with a cross-hatched section (131a) shows CO₂ (131a) being absorbed into a liquid stream. This liquid stream then flows into a series of processing units. Unit 150 is labeled "LOW-CONCENTRATION NH₄HCO₃(aq) + NH₄⁺ + OH⁻". Unit 140 is labeled "HIGH-CONCENTRATION NH₄HCO₃(aq)". Unit 141 is labeled "NH₃(g)". Unit 142 is labeled "M". Unit 143 is labeled "SLURRY OR SOLID". Unit 120 is labeled "FRESH WATER" and "COMPRESSED AIR". Unit 122 is labeled "NH₃ STORAGE". The system is designed to capture CO₂ from a power plant and produce a slurry or solid product.

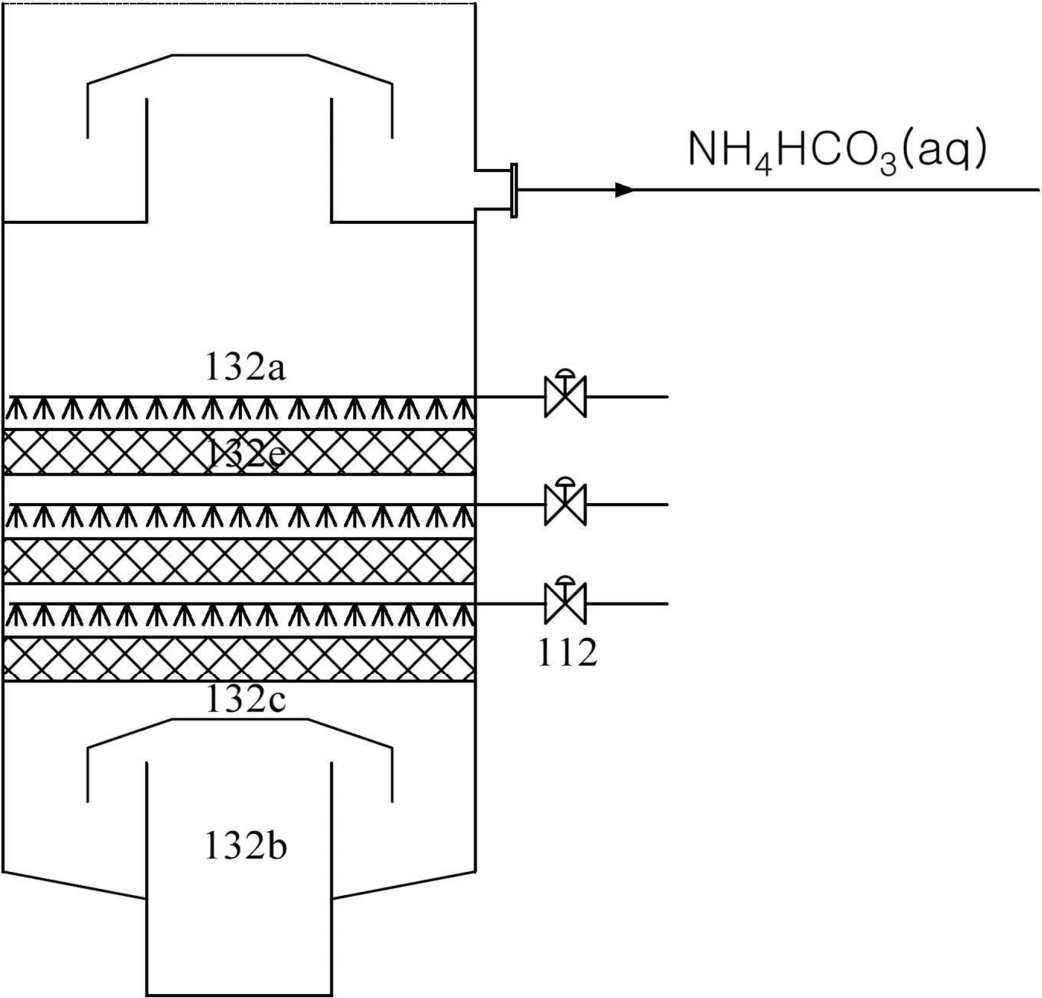
[Figure 5]



[Figure 6A]



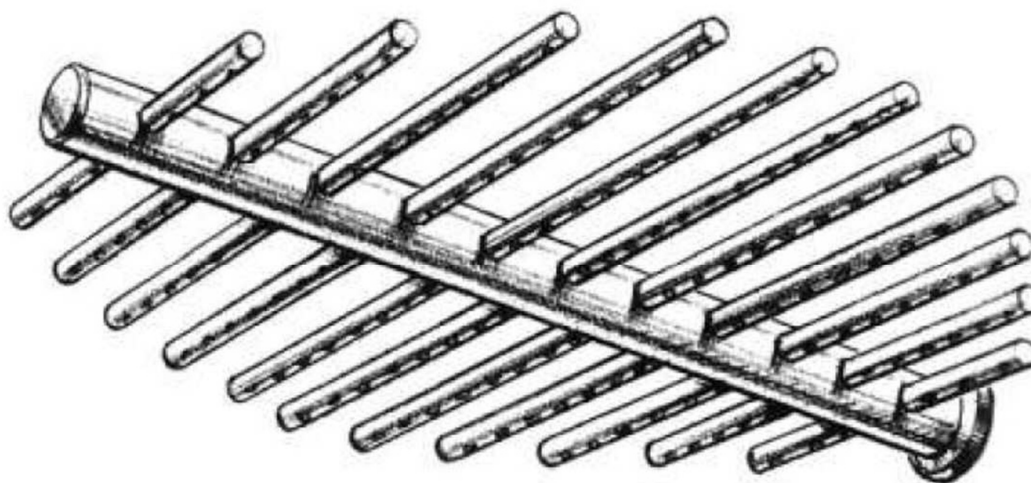
[Figure 6B]



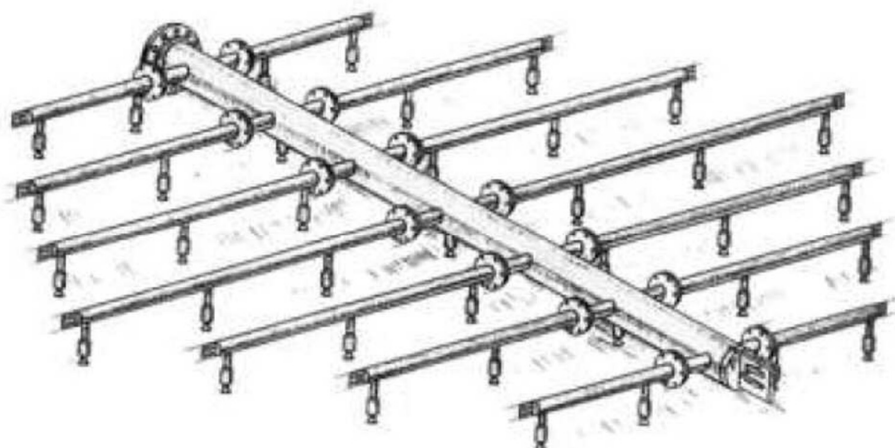
[Figure 8]



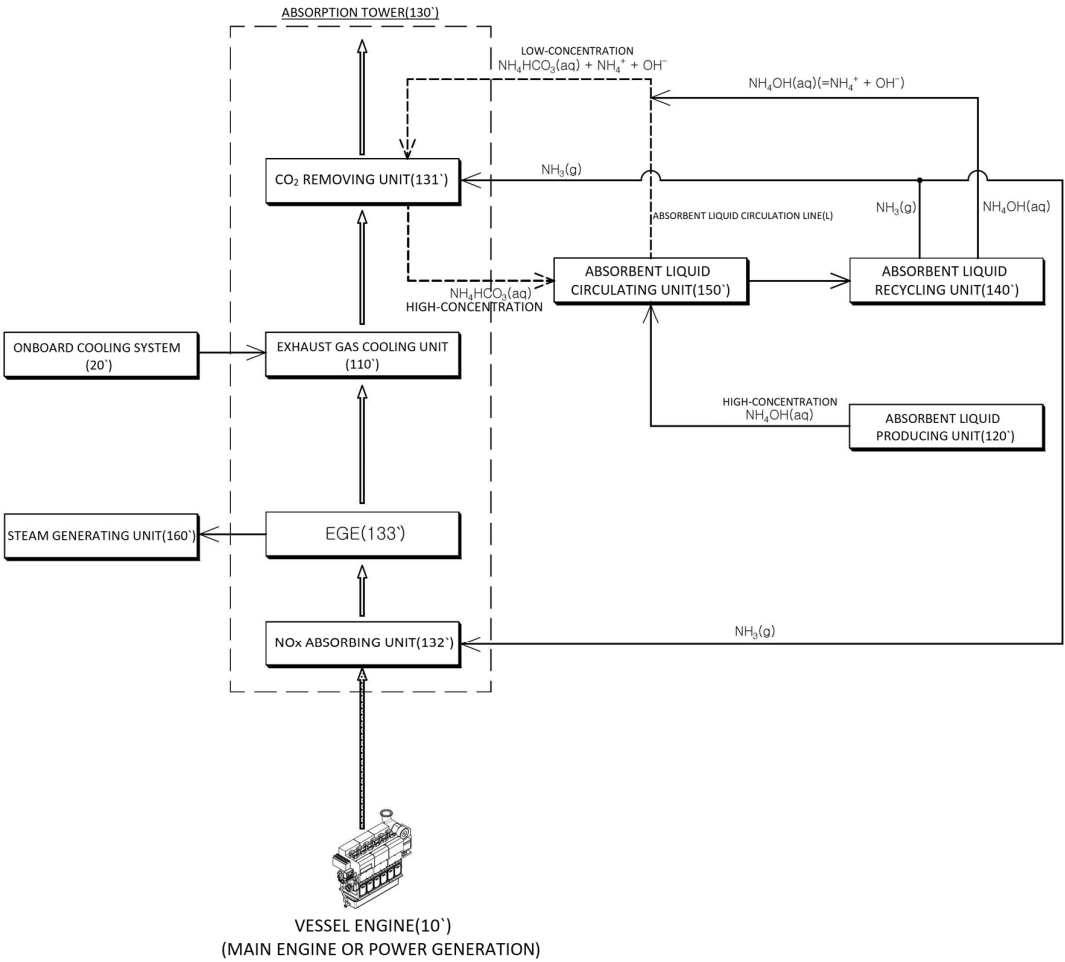
[Figure 9A]



[Figure 9B]



[Figure 10]



130°

150°

10°

LOW-CONCENTRATION
 $\text{NH}_4\text{HCO}_3(\text{aq}) + \text{NH}_4^+ + \text{OH}^-$

$\text{NH}_3(\text{g})$

HIGH-CONCENTRATION
 $\text{NH}_4\text{HCO}_3(\text{aq})$

$\text{NH}_4\text{OH}(\text{aq}) (= \text{NH}_4^+ + \text{OH}^-)$

140°

$\text{Ca}(\text{OH})_2$
 $\text{Mg}(\text{OH})_2$

$\text{NH}_3(\text{g})$

SLURRY OR SOLID

20°

110°

11°

160°

STEAM CONSUMER

CONDENSED WATER RETURN

UREA WATER TANK

UREA WATER SUPPLY PUMP

EXHAUST GAS

120°

FRESH WATER

COMPRESSED AIR

$\text{NH}_4\text{OH}(\text{aq})$

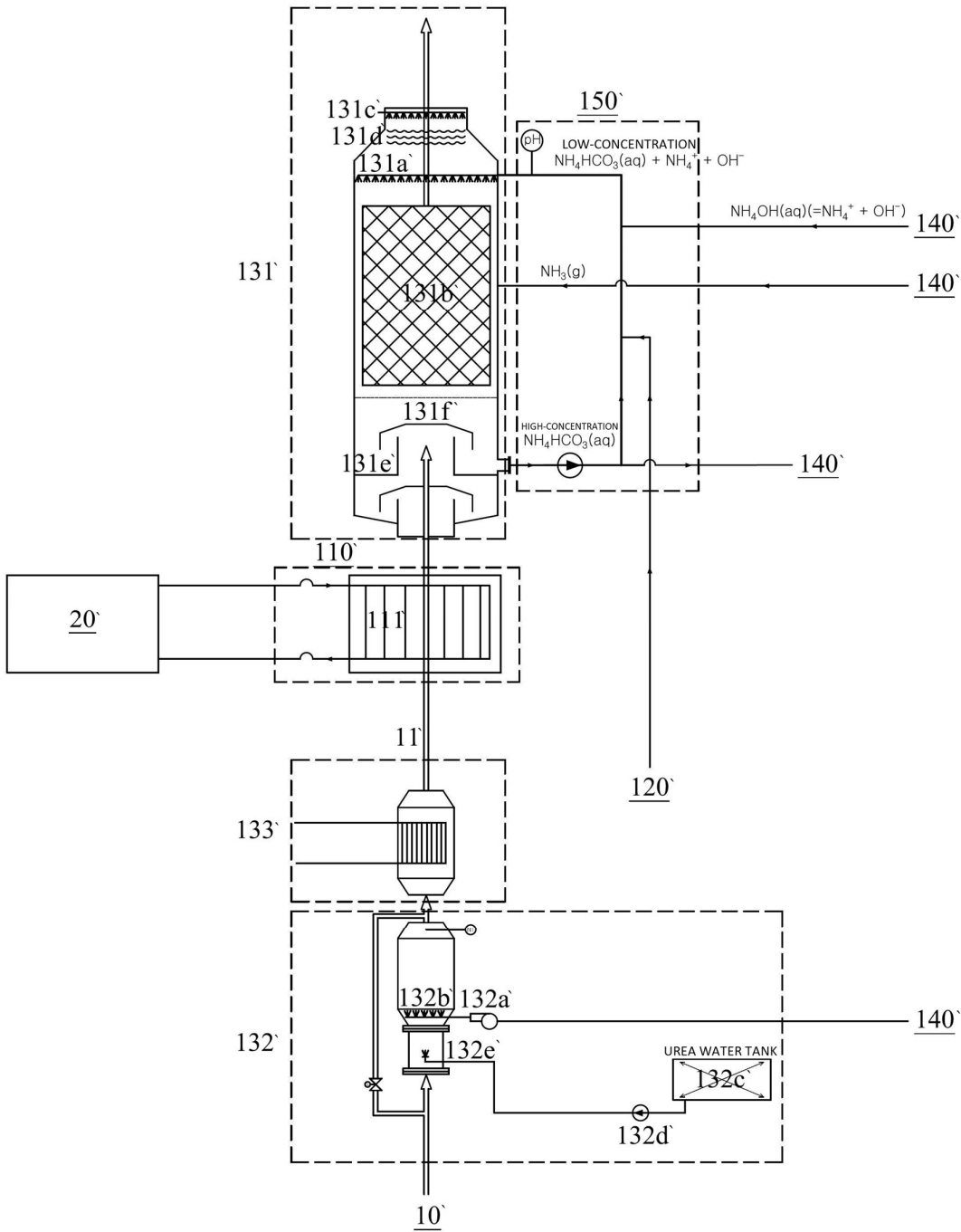
NH_3

NH_3 STORAGE

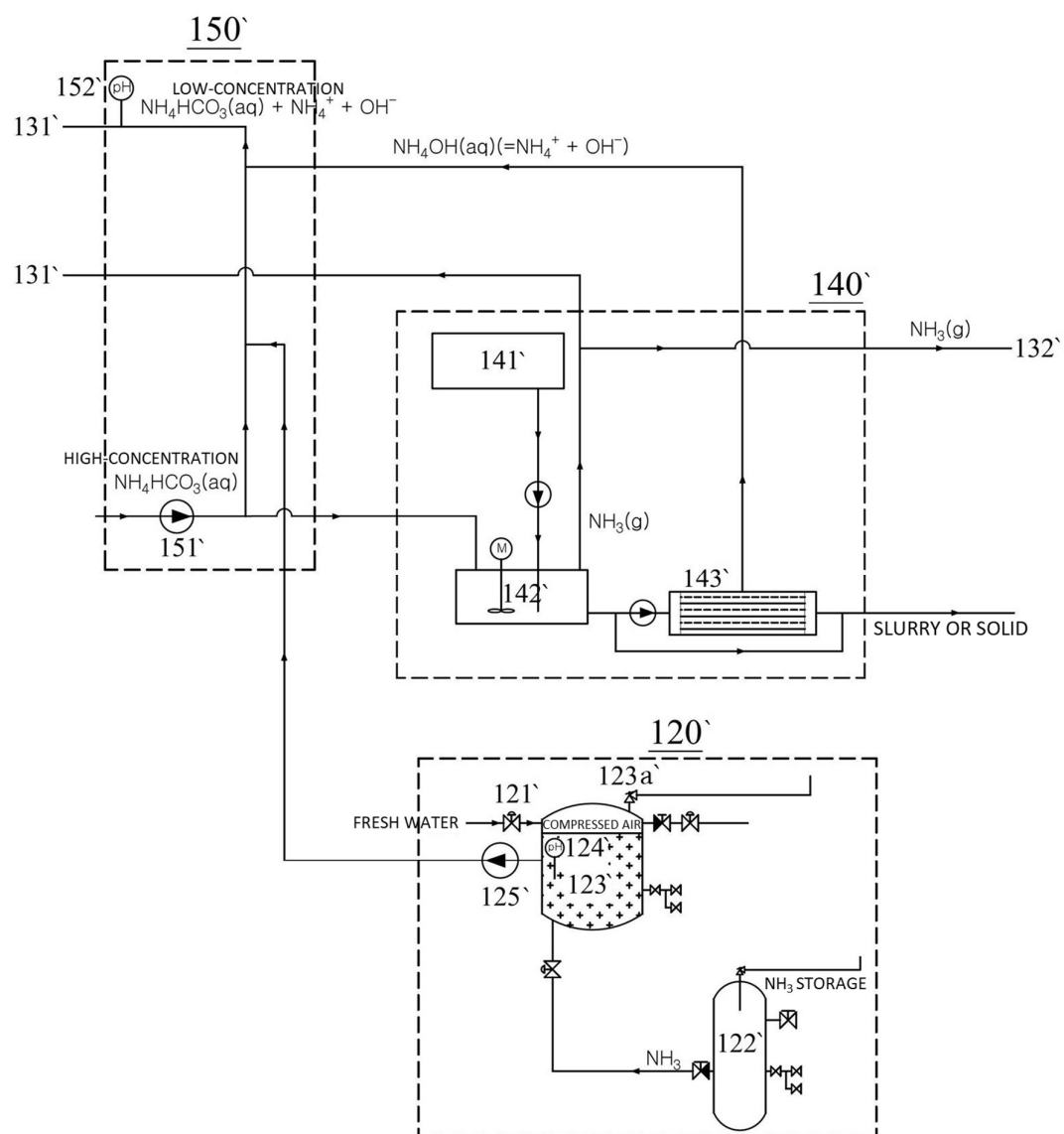
VESSEL ENGINE(10°)

(MAIN ENGINE OR POWER GENERATION ENGINE)

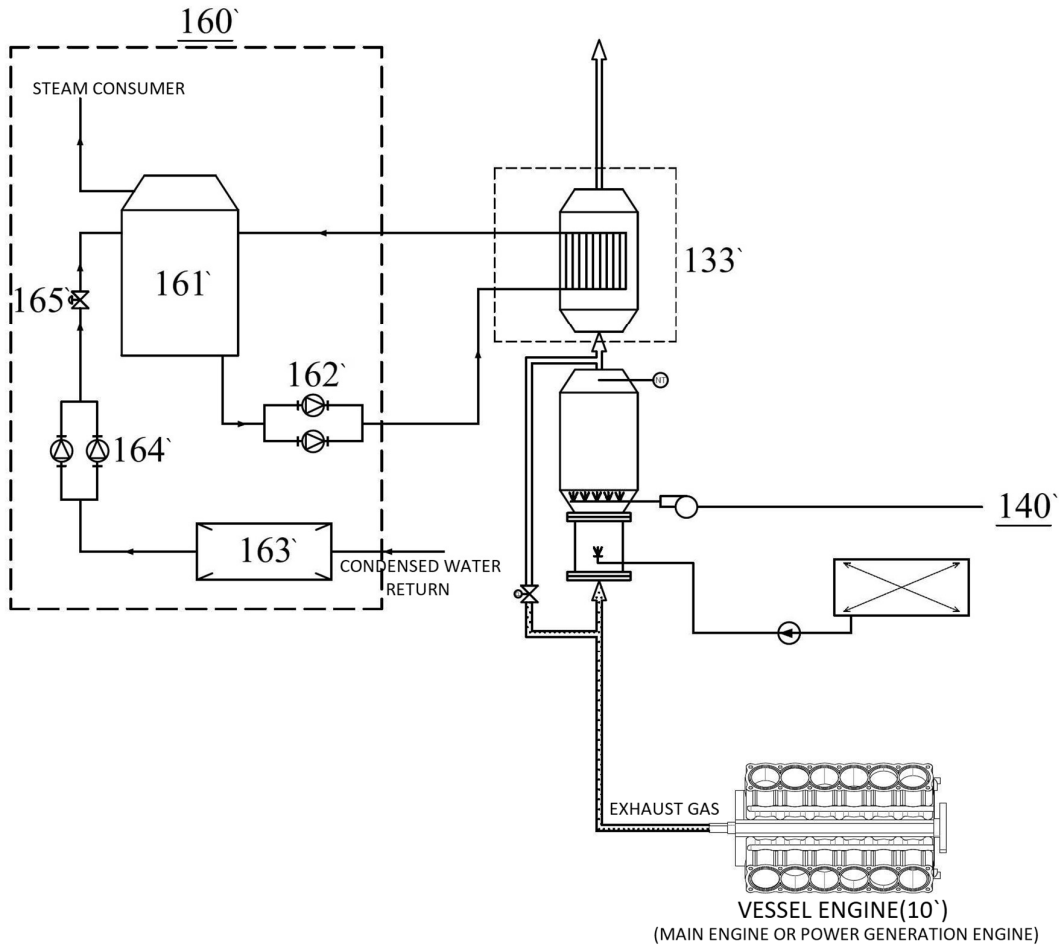
[Figure 12]



[Figure 13]



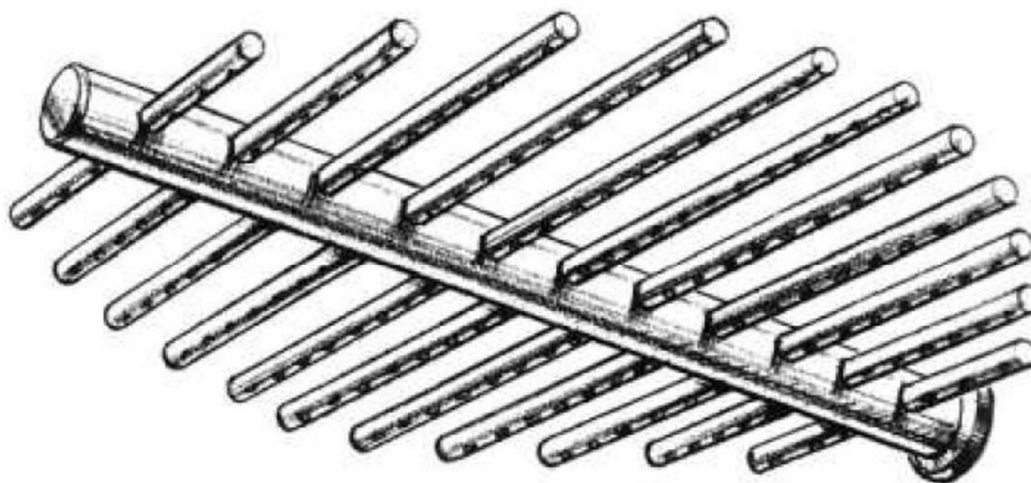
[Figure 14]



[Figure 15]



[Figure 16A]



[Figure 16B]

