Technique of Phosphorus Recovery from Dehydrated Sludge by Incineration

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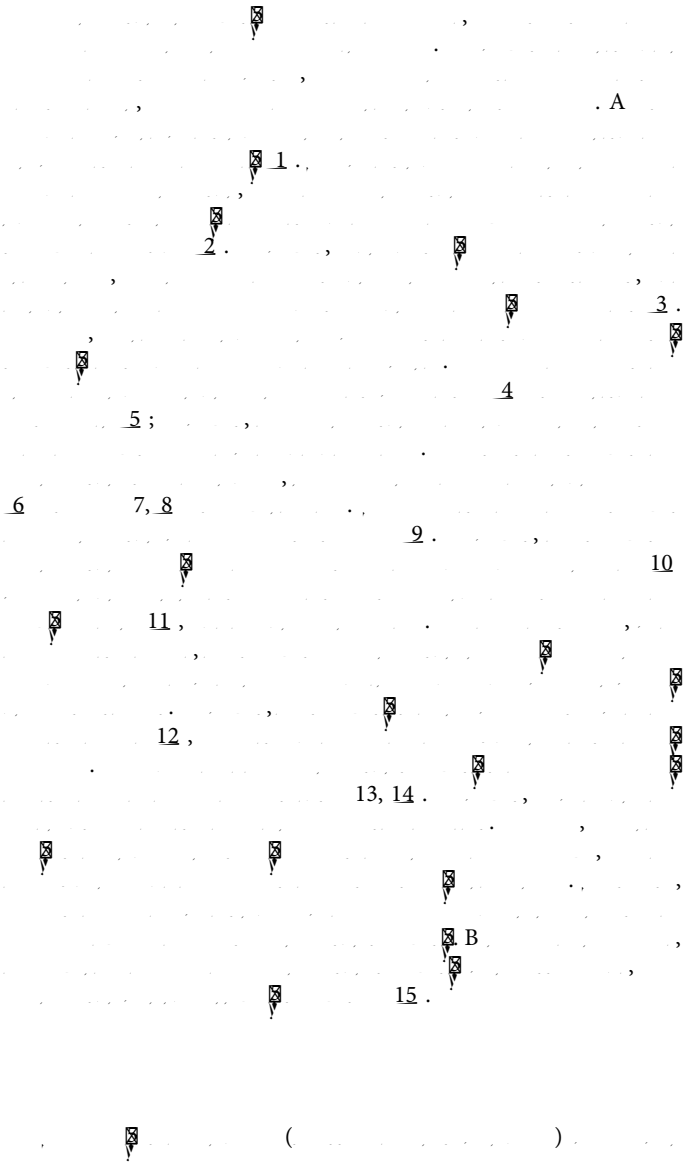
Abstract



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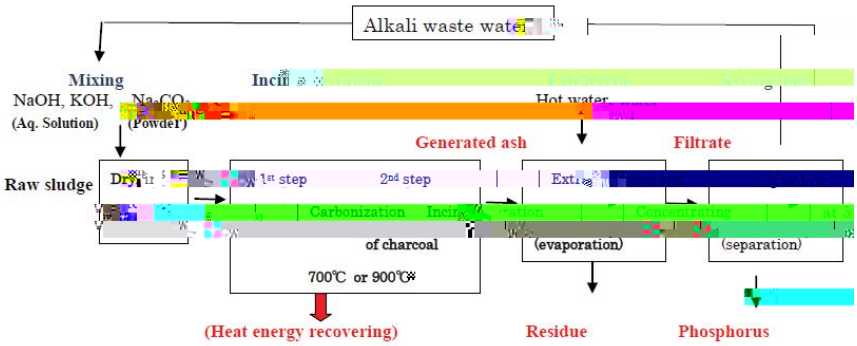

Figure 1: Phosphorus recovery method.

Amount of the added alkali (g)

Figure 2: Relation of the phosphorus with the alkali addition rate.

Table 1: Appropriate addition ratio.

Reagent	Amount of the raw sludge	Amount of the alkali	Incineration temperature (ęC)
NaOH	50g	1g	750
KOH	50g	2g	750
Na_2CO_3	50g	$_3$2g	900

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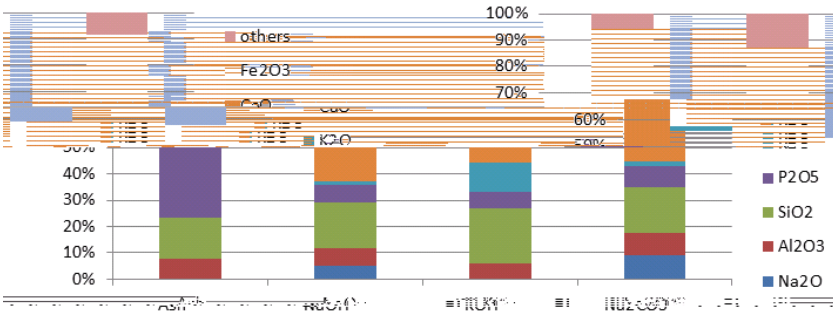

Remarks

Ash; Ash of the raw sludge, NaOH; Residue (NaOH), KOH; Residue (KOH)

Na_2CO_3; Residue (Na_2CO_3)

Figure 5: Chemical composition of the ash and residue of the basic experiment.

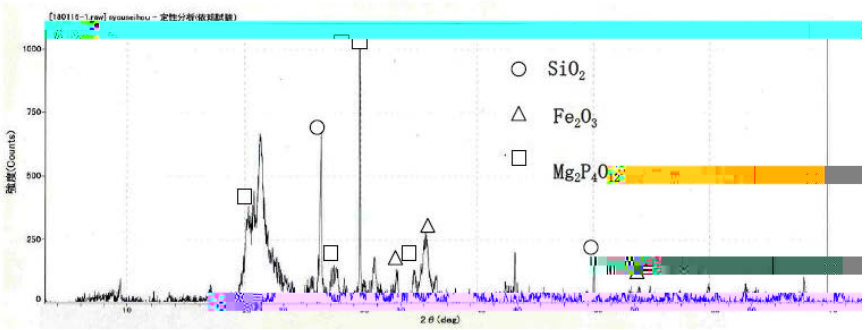

Figure 6: X-ray spectrum of the ash of the raw sludge.

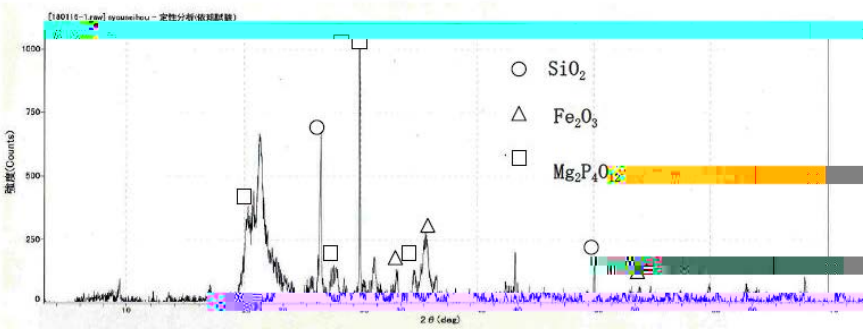

Figure 7: X-ray spectrum of the residue (NaOH).

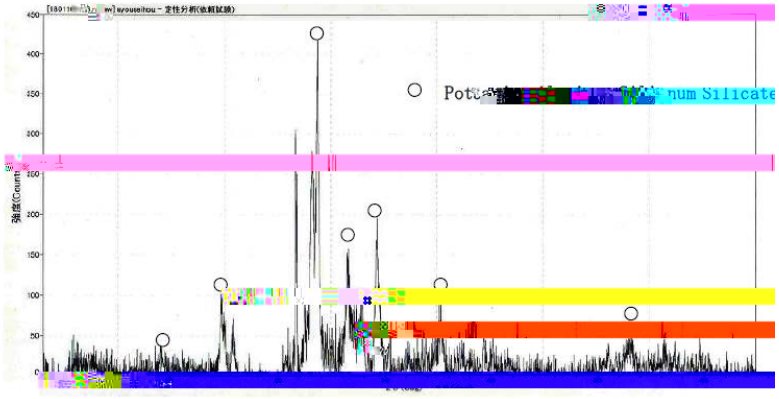

Figure 8: X-ray spectrum of the residue (KOH).

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