ALIEN PROPERTY CUSTODIAN

PROCESS FOR THE PRODUCTION OF ALKALINE AZIDES

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This invention relates to improvements in or relating to the process for the production of alkaline azides.

Alkaline azides are formed by the action of nitrous oxide on alkaline amides, and the alkaline amides result from the conversion of the alkali metals with ammonia. These reactions proceed according to the following formulas:

 $2Na + 2NH_3 = 2NaNH_2 + H_2$ $2NaNH_2 + N_2O = NaN_3 + NaOH + NH_3$

The alkaline azides are industrially produced as is known either in batches or in a continuous process. Thus, e. g., there has been proposed for carrying out the continuous process to introduce continuously equivalent quantities of gaseous ammonia and molten alkali metal, for example sodium, into a large excess of molten finished alkali amide, for example, sodium amide, and to convert in another zone the continuously discharging alkali amide with gaseous nitrous oxide in the presence of alkali azide and alkali hydroxide.

As well in the batch process as in the continuous process the alkali amide supplied is very easily caked with the alkali azide and alkali hy- 25

droxide still present from the reaction, this caking stopping the conversion to a large extent. In order to effect a complete conversion of the reaction components the caked mixture has repeatedly to be broken up.

According to the present invention these difficulties of the known processes are overcome by introducing the alkali amide into the reaction vessel for the conversion with nitrous oxide not, 10 as hitherto performed, in the liquid but in a powdery state. It has namely been found that it is not necessary to introduce the alkali amide in a liquid form into the conversion apparatus.

The introduction of the alkali amide into the reaction vessel in a powdery state can be applied to the batch as well as in the continuous working process. On applying the process of the invention to the batch procedure, the time of the conversion of the alkali amide with the nitrous oxide can be shortened for three to four hours. The conversion can be carried out in a reaction drum mill known for this purpose and under the already known working conditions.

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