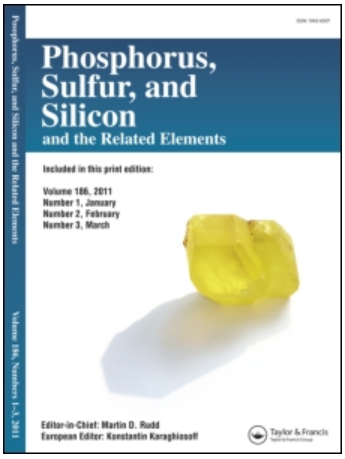

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The Piesteritz Hypophosphite Process

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THE PIESTERITZ HYPOPHOSPHITE PROCESS

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A new sodium hypophosphite process has been developed at VEB Agrochemie Piesteritz.
Starting materials are phosphorus sludge and a suspension of $Ca(OH)_2$ in sodium hydroxide solution. The PH_3/H_2-gas mixture being formed at the first process stage is burned to phosphoric acid and absorbed in that form. The crude phosphite-hypophosphite solution is filtered and the filtrate is neutralized with H_3PO_2. For this purpose H_3PO_2 is generated in a secondary process line. The neutralized solution is concentrated and filtered again.
A crystallization, centrifugation and drying stage follows. The mother liquor enriched with phosphite is fed back and regenerated.
The pure final product $NaH_2PO_2 \cdot H_2O$ is perfectly suitable as a reducing agent for chemical nickelization of metals and plastics.

The process runs simplier and more efficient than the competitive processes on the basis of pure yellow phosphorus. Main advantages: application of heavily contaminated raw materials; spontaneous separation of impurities; combination of several process steps which had been individually operated so far.
The process is protected by various patents.