

Diamond

Diamond coated niobium, tantalum and tungsten are insoluble anode materials with outstanding properties for the electrolytical oxidation. Under optimised conditions OH radical and other substances with high oxidating capacity like ozone and peroxy compounds are produced in consequence of the high overpotential for oxygen production. Therefore they perfectly allow the oxidation of organic compounds, cyanides etc.

Interesting applications have been found for diamond coated anodes: disinfection, oxidation of organic compounds in water (globally COD reduction) and also for the production of ozone, peroxy sulphate and peroxy acetic acid. It is not necessary to add chemicals; the oxidising species are produced in situ in the liquid to be treated.

Working with diamond coated anodes demands optimised electrolytic conditions at the anode. Diamond coated anodes can also be implanted in electrolysis cells for metal recovery with special precautions. This allows to combine both tasks - metal recovery and organic oxidation.

Metakem offers

- evaluation of the COD reduction curve as a service;
- supply of diamond coated anodes in general,
- adaption of diamond anodes to existing standardised electrolytic cells,
- supply of special anode stacks for disinfection and ozone production and
- electrolytic equipment for the operation of diamond anodes.

Please use our advice concerning the use of diamond coated anodes.