

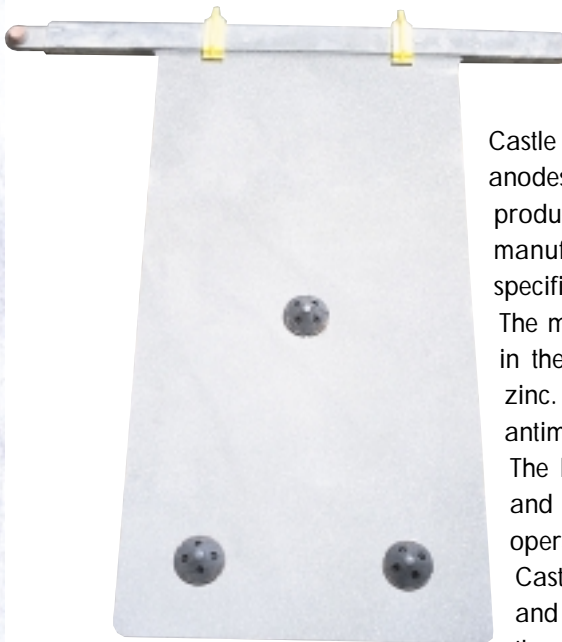


ANODES

Company Overview

Established in 1933, Castle Lead Works is Africa's largest manufacturer of lead products, with services ranging from lead-ingot manufacture to the installation of complete chemical plants. Lead has developed into a modern material suitable for the needs of the new millennium in terms of both performance and economics. Castle Lead Works carries out its own research and development and has its own analytical laboratory with atomic absorption spectrometry capabilities.

The company has a first class safety record and is committed to its philosophy of environmental sensitivity, health, hygiene and safety.



S-X (Solvent Extraction) Electrowinning

Castle Lead Works has been producing world class cast anodes since 1969 and is the major supplier of these products for the South African market. Anodes are manufactured in strict accordance with customer specifications and design requirements.

The most popular uses of cast lead anodes in this field are in the recovery of copper, nickel, manganese, cobalt and zinc. The anodes are usually cast or fabricated from 6% antimonial lead or silver lead alloys.

The life span of cast anodes can be anything between 2 and 15 years, depending on operational requirements and operating conditions.

Castle Lead Works can supply anodes to any specification and should be consulted at the planning stage for any of the electrolytic processes mentioned here.

Rolled Blade Anodes

Featuring a sophisticated grain structure designed for greater longevity, Rolled Blade anodes are part of a worldwide trend away from cast-type anodes, in which new generation alloys are harnessed for the production process.

In addition to its South African customers, Castle Lead Works has supplied Rolled Blade anodes to major copper, nickel and cobalt electrowinning plants in Zambia and Zimbabwe.



FACT SHEET



Electroplating Industry

8 % Antimonial Lead

7% Tin Lead

Pure Tin

Hooks must be copper, tin coated and leadburned to the extruded lead anode.

Anode Sections and Weights

Flat fluted	75 mm	4,0 kg/m
Round fluted	31,75 mm dia 38,10 mm dia 50,0 mm dia	8,1 kg/m 9,7 kg/m 18,8 kg/m
Plain Round	31,75 mm dia 38,10 mm 50,00 mm	8,53 kg/m 12,04 kg/m 23,2 kg/m

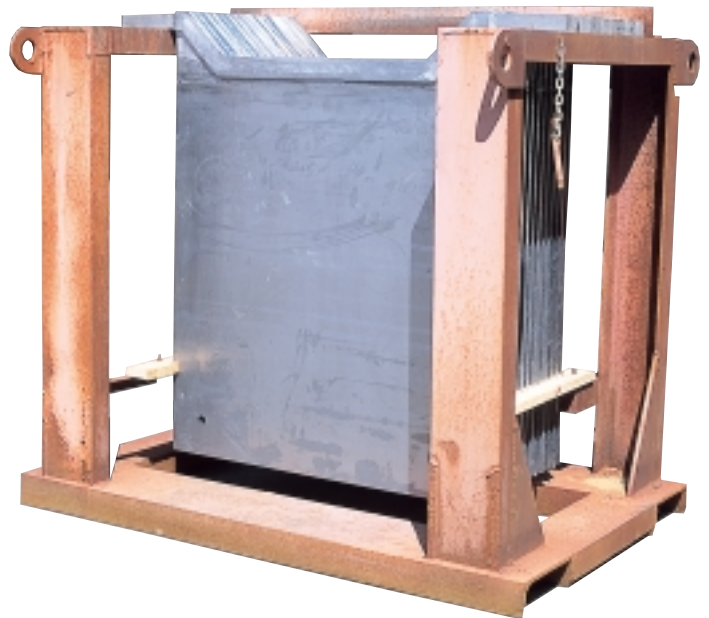
Care of Anodes in Chrome or Nickel Plating Tanks

The life of anodes is dependent on their treatment.

- Yellow anodes are non-functioning and must be scrubbed with a wire brush before use.
- Anodes which are chocolate brown are functioning correctly.
- All anodes should be of the same material as resistance varies with different types.

Recycling

As a value-added service to its customers, Castle Lead Works also offers an anode refurbishing facility.



FACT SHEET



**CASTLE
LEAD WORKS**

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