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**Durantes Vincunt**

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**Chlorate**

**Chlor-Alkali Business Unit**

## Dimensionally Stable Anode and Coatings

DSA® is a registered trademark of De Nora Companies.

**Over the last 18 years**, pulp and paper manufacturing companies have converted to the use of environmentally friendly sodium chlorate for their pulp bleaching processes. This conversion has made the production of sodium chlorate a major chemical industry with production of over 2.3 million tons per year. Today more than 95% of the sodium chlorate produced is consumed in pulp bleaching.

**De Nora** is the leading supplier of electrodes and anode coatings for the production of sodium chlorate in all technologies.

**De Nora's** supply management group is expert in the acquisition of long lead item materials such as titanium and precious metals.

**De Nora** coatings are able to operate at very high current density (up to 6 kA/sq.m.), long life (more than 8 years in many cases) and high efficiency.



Chlorate Anodic Bundle

**De Nora** coatings are low oxygen for improved efficiency and designed to reduce the impurity build up typical of conventional coatings used in sodium chlorate production.

**De Nora** continues to develop new anode coatings to further increase production efficiencies, reduce by product oxygen and reduce overall costs.

**De Nora** has also ongoing development work on a cathode coating for use in chlorate cells to reduce chrome addition and power costs.

## Cell Refurbishment

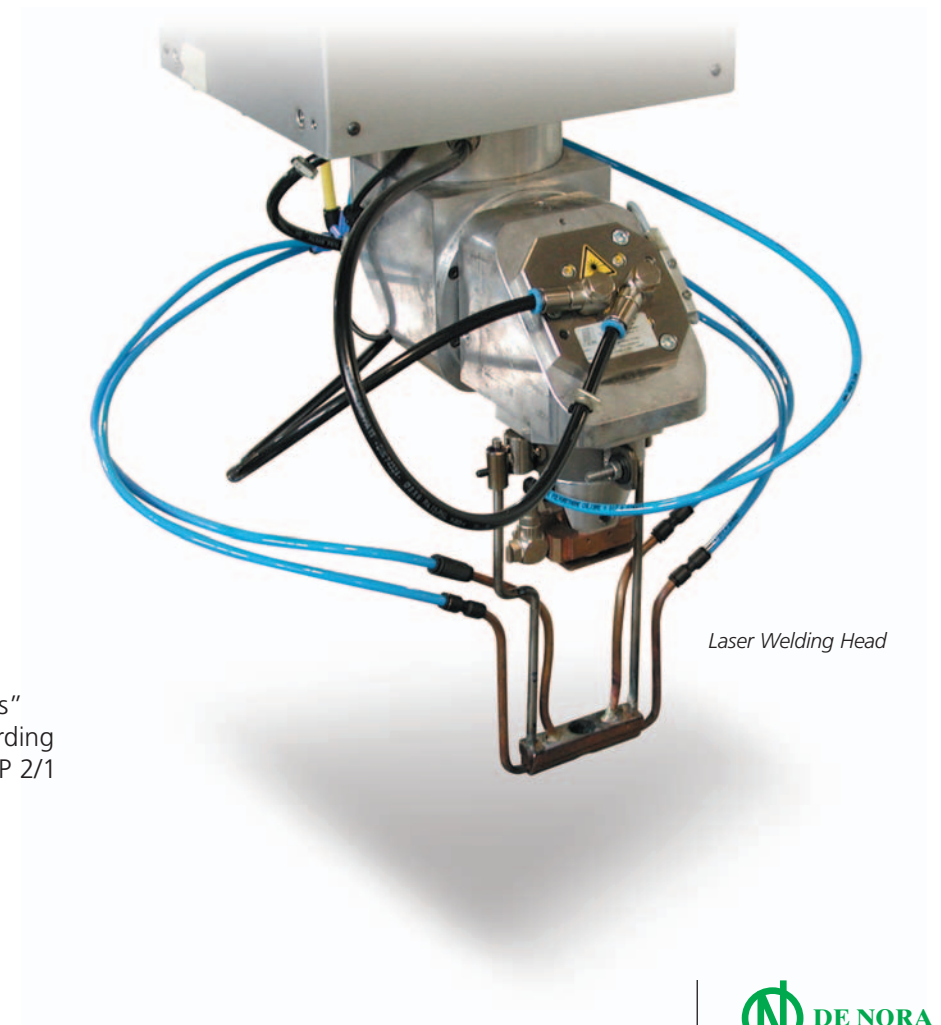
**De Nora** maintains the equipment and knowledge to perform complete chlorate cell refurbishment at several locations world-wide. Included in this equipment is high quality laser technology for titanium welding with over 10 years of experience.

### Advantages include:

- Low thermal impact with a minimum of mechanical distortion and residual stress
- Low weld porosity with a smooth appearance



Weld Path



Laser Welding Head

**De Nora's** "laser welding procedures" are certified by TUV according to DIN EN 288 AD-Mbl HP 2/1