# PART 3  Cleaner Production Case Studies

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http://es.epa.gov/studies/cs569.html

Country
USA

Industry
Electroplating

Principles Discussed
• Treatment - Evaporation Unit & ion exchange system
• Rinsing
• Drag-out reduction

2. Allied Metal Finishing

Country
USA

Industry
Electroplating

Principles Discussed
• Water reduction
• Recovery of metals - Electrolytic Recovery

3. Always Powder Coating Pty Ltd


Country
Australia

Industry
Powder Coating

Principles Discussed
Alternative Processes - replace conventional iron phosphate pretreatment system with an inorganic phosphate pre-treatment process.
4. Carramar Lighting Pty Ltd


Country
Australia

Industry
Powder Coating

Principles Discussed
• Alternative process using a three-way valve system for cleaner, rinsewater and chromate/phosphate.

5. C.M. Almy Pty Ltd.

http://www.state.me.us/dap/case/cmalmy.htm

Country
USA

Industry
Electroplating

Principles Discussed
• Water reduction
• Treatment, recovery of metals and chemicals and recycling of rinsewaters - distillation system

6. Cougar Lighting Pty Ltd


Country
Australia

Industry
Electroplating

Principles Discussed
• Water reduction
• Treatment and recycling of rinsewaters - deionising units
7. Cromadora Delgado S.A. de C.V.

http://www.unido.org/services/environment/envncpc/temp/casestudy/casestudy4.html

Country
Mexico

Industry
Electroplating

Principles Discussed
- Alternative Processes - replacement of cyanide with alternative solutions
- Recovery of metals and chemicals
- Monitoring of plating processes
- Lighting systems for improved energy efficiency

8. Eastside Plating

http://es.epa.gov/oeca/sctor/fab/fabp2.html

Country
USA

Industry
Electroplating

Principles Discussed
Improved wastewater treatment through waste segregation and gravity feed.

9. Email Ltd - Kitchen and Bathroom Products Division


Country
Australia

Industry
Electroplating

Principles Discussed
- Recovery of metals - Electrolytic recovery
- Rinse
10. Gainsborough Hardware Industries Pty Ltd


Country
Australia
Industry
Electroplating
Principles Discussed
• Alternative Processes - Replace gold cyanide system for Electrophoretic Plating.

11. Gillette Company

Country
USA
Industry
Electroplating
Principles Discussed
• Treatment and recycling of rinsewaters - deionising units
• Closed-loop rinsing
• Drag-out reduction

12. Holly Carburetor

Country
USA
Industry
Electroplating
Principles Discussed
• Treatment - sulfide precipitation
13. Hurd Lock

Country
USA
Industry
Electroplating
Principles Discussed
• Waste segregation
• Treatment - Ion Exchange

14. Industrial Galvanisers Corporation

Country
Australia
Industry
Galvanising
Principles Discussed
Alternative Processes - Continuous electrolytic preflux treatment (CEPT)

15. Intrepid Industries Pty Ltd

Country
Australia
Industry
Powder Coating
Principles Discussed
Alternative cleaning method - replaced methylene chloride paint stripping process with a pyrolysis process - an oven that removes the paint.
16. Kwan Kee Electroly Dyeing

Country
Hong Kong

Industry
Anodising

Principles Discussed
Housekeeping through improved layout and dry floor operations
Improved rinsing through the installation of counter-current rinsing and controls on water addition.
Drag-out reduction through the installation of drain boards and drip bars

17. Medford Plastics Company

Country
USA

Industry
Electroplating

Principles Discussed
• Waste Segregation
• Treatment

18. Merit Partnership

Country
USA

Industry
Electroplating

Principles Discussed
• Water reduction in rinsing processes using conductivity sensors
19. **All Metals Processing Company**

**Country**
USA

**Industry**
Electroplating

**Principles Discussed**
Modifications to process layout and improve rinsing methods to reduce drag-out and waste generation.

20. **Methven Tapmakers**


**Country**
New Zealand

**Industry**
Electroplating

**Principles Discussed**
- Water reduction in rinsing processes
- Counter Current Rinsing

21. **Newcastle Galvanising (Graham Group)**


**Country**
Australia

**Industry**
Galvanising

**Principles Discussed**
Housekeeping - shop floor layout, tank modification, development of a unique hood system.
Use of recycled wastewaters
22. Penfold Engineering Co


Country
Australia
Industry
Powder Coating
Principles Discussed
Water reduction in rinsing processes
Treatment - Ion exchange

23. Phillips Plating Company

Country
USA
Industry
Electroplating
Principles Discussed
Treatment and recycling of rinsewaters - Evaporation units

24. Pioneer Metal Finishing Inc.

http://es.epa.gov/studies/cs13007.html

Country
USA
Industry
Electroplating
Principles Discussed
Recovery of metal- electrolytic recovery
25. Pratt and Whitney Aircraft

http://es.epa.gov/studies/cs567.html

Country
USA

Industry
Electroplating

Principles Discussed
Treatment and recycling of rinsewaters - evaporation and ion-exchange

26. Premier Plating Company


Country
Australia

Industry
Electroplating

Principles Discussed
Treatment - Static treatment system
Recycling of wastewaters

27. Southern Maine Industries Corporation

http://www.state.me.us/dep/case/southern.htm

Country
USA

Industry
Electroplating

Principles Discussed
- Waste segregation and treatment through ion exchange units
- Drag-out reduction through minor modifications to process
- Rinsing
28. Von Duprin, Inc

http://es.epa.gov/studies/cs566.html

**Country**  
USA

**Industry**  
Electroplating

**Principles Discussed**

- Drag-out reduction through extension and automation of drain times and counter-current rinsing.
- Water reduction through closed-loop rinsing
- Treatment and metal recovery - ion exchange and reverse osmosis.