

ABSTRACT

A PROCESS FOR PHOSPHATE-COATING METAL SURFACES

A process for phosphating a metal surface, particularly to avoid white spots, involving treating the metal surface with an acidic aqueous phosphate solution in which one establishes and maintains a concentration of at most 0.2 g/l and preferably no chlorate ion as well as the smallest practical concentration never exceeding 0.5 g/l of chloride ion, the solution otherwise containing:

- a) from 0.1 to 1.5 g/l of zinc ion,
- b) from 5 to 50 g/l of phosphate ion,
- c) from at least 0.2 to 4 g/l of manganese ion,
- d) at least 0.05 g/l of a fluoride ion, and
- e) at least one of the following phosphating accelerators in the following concentrations:
 - i) from 0.01 to 0.2 g/l of nitrite ion,
 - ii) from 1 to 15 g/l of nitrate ion,
 - iii) from 0.5 to 5 g/l of hydrogen peroxide (based on 100% H_2O_2),
 - iv) from 0.05 to 2 g/l of m-nitro-benzene-sulfonate ion,
 - v) from 0.05 to 2 g/l of m-nitro-benzoate ion, and
 - vi) from 0.05 to 2 g/l of p-nitrophenol.

This Sheet Has Been Replaced

