

Title (en)
SUPPLEMENT AND PRODUCTION METHOD FOR SURFACE-TREATED METAL MATERIAL

Title (de)
ERGÄNZUNG UND HERSTELLUNGSVERFAHREN FÜR EIN OBERFLÄCHENBEHANDELTES METALLMATERIAL

Title (fr)
SUPPLÉMENT ET PROCÉDÉ DE PRODUCTION D'UN MATÉRIAU MÉTALLIQUE TRAITÉ EN SURFACE

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Application
EP 13886009 A 20130528

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Abstract (en)
The purpose of the present invention is to provide a replenisher that avoids an increase in the HF concentration in a surface-treatment liquid for metal materials, is capable of supplying zirconium ions at high concentration by using the metal material surface-treatment liquid, and has excellent long-term storage stability, in order to continuously chemically convert and/or electrolytically treat a metal material. This replenisher contains prescribed amounts of: a zirconium compound (A) not containing fluorine and including at least one type selected from a group comprising zirconium basic carbonate, zirconium carbonate, zirconium hydroxide, and ammonium zirconium carbonate; a fluorine-containing matter (B) including at least one type selected from a group comprising hydrofluoric acid, a hydrofluoric acid salt, fluoro-zirconic acid, and a fluoro-zirconic acid salt; and an acid component (C) including at least one type selected from a group comprising nitric acid, hydrochloric acid, sulfuric acid, and acetic acid.

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