

ABSTRACT

ZINC-BASED METAL COATED STEEL SHEET

There is provided a zinc-based metal coated steel sheet having excellent properties, such as corrosion resistance and adhesion, and having excellent conductivity at a low contact pressure. A surface treatment liquid contains a resin emulsion that contains a cationic urethane resin emulsion and/or a nonionic acrylic resin emulsion, a tetraalkoxysilane, at least one silane coupling agent (c) that contains at least one reactive functional group selected from active hydrogen-containing amino group, an epoxy group, a mercapto group, and a methacryloxy group, a chelating agent (d), a vanadic acid compound (e), a titanium compound (f), and water in a specific ratio. The surface treatment liquid has a pH of 3 to 6. The surface treatment liquid is applied to a surface of a zinc-based metal coated steel sheet and dried by heating to form a first layer. Next, a surface treatment liquid containing an organic resin is applied to a surface of the first layer and dried by heating to form a second layer.

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