

[Abstract]

The surface-treated steel includes: a steel; a plated layer containing Zn or a Zn alloy formed on a surface of the steel; and a chemical conversion coating film formed on a surface of the plated layer, wherein the chemical conversion coating film contains an organosilicon compound having a siloxane bond, and P and F, and when the abundance ratio of an alkylene group and a siloxane bond in the organosilicon compound is measured by Fourier transform infrared spectroscopy (FT-IR), a ratio $A1/A2$ of a peak value $A1$ of an absorbance at 2,800 to 3,000 cm^{-1} indicating the alkylene group to a peak value $A2$ of an absorbance at 1,030 to 1,200 cm^{-1} indicating the siloxane bond is 0.10 to 0.75.

FIG. 1