

HOT-DIP ZN-ALLOY-PLATED STEEL SHEET

ABSTRACT

This hot-dip Zn-alloy-plated steel sheet comprises: a steel sheet; a hot-dip Zn-alloy-plated layer arranged on a surface of the steel sheet; and a complex oxide coating film arranged on a surface of the hot-dip Zn-alloy-plated layer. The complex oxide coating film includes vanadium and a constituent component of the hot-dip Zn-alloy-plated layer, and the entire surface of the coating film satisfies the following formula (1): $S[\text{Hydroxide}]/(S[\text{Hydroxide}] + S[\text{Oxide}]) \times 100 \leq 40$. In formula (1): S[Oxide] is the area exhibited by a peak having a center at approximately 1022 eV ascribable to a Zn oxide in an intensity profile in XPS analysis of the surface of the complex oxide coating film; and S[Hydroxide] is the area exhibited by a peak having a center at approximately 1023 eV ascribable to a Zn hydroxide in an intensity profile in XPS analysis of the surface of the complex oxide coating film.

Figure 1