

## **ABSTRACT**

### **AUSTENITIC STAINLESS-STEEL SHEET AND PROCESS FOR PRODUCING HIGH-ELASTIC-LIMIT NONMAGNETIC STEEL MATERIAL THEREFROM**

Provided is a raw steel sheet for obtaining a high-strength nonmagnetic austenitic stainless-steel material therefrom which has a high elastic-limit stress and excellent toughness. The raw steel sheet is an austenitic stainless-steel sheet that has a composition which contains, in terms of mass%, up to 0.12% C, 0.30-3.00% Si, 2.0-9.0% Mn, 7.0-15.0% Ni, 11.0-20.0% Cr, and up to 0.30% N and further contains at least one of up to 3.0% Mo, up to 1.0% V, up to 1.0% Nb, up to 1.0% Ti, and up to 0.010% B, with the remainder comprising Fe and unavoidable impurities, and which has an Ni equivalent of 19.0 or greater, wherein when the average crystal-grain diameter of the austenite is expressed by  $d$  ( $\mu\text{m}$ ), the value of  $d^{-1/2}$  is 0.40 or greater.

Figure 3