ABSTRACT

The present invention provides a stainless steel sheet which is capable of exhibiting favorable strength and ductility and of improving workability (formability, etchability) and fatigue property. The invention also provides a method for producing the stainless steel sheet with low cost and stable supply.

The present invention is a stainless steel sheet for parts, which consists essentially of: 0.01-0.08 mass % of C, 0.1-2.0 mass % of Si, 3.0 mass % or less of Mn, 10.0-20.0 mass % of Cr, 3.0-12.0 mass % of Ni, and 0.02-0.24 mass % of N, to total mass of the stainless steel as 100 mass %, Md value derived from the formula:

$$Md = 500 - 458(C + N) - 9(Si + Mn) - 14Cr - 20Ni$$

by substituting values in mass % of the above respective components to be contained in the stainless steel sheet satisfying within the range of 0 to 80, and the remainder including chemical composition as inevitable impurities, among compounds formed by the above components, indwelling content of the compounds whose maximum diameter is 20 μm or more being 30 or less per 5 g (mass) of the stainless steel, and the metallographic structure of the entire stainless steel being a mixed structure of recrystallized grain and unrecrystallized portion.