ABSTRACT

A member excellent in damping capacity in which noise-reducing properties and vibration-damping properties are enhanced is provided by employing a steel sheet having high workability, and a process for producing the member and a steel sheet suitable for the member excellent in the damping capacity are provided. The member excellent in the damping capacity is produced by fabricating a steel sheet having an average grain diameter of 30 μm or more and a Vickers hardness of 120 or less at the hardest part thereof. For example, the steel sheet has a composition composed of, by mass%, C: at most 0.050%, Si: less than 1.0%, Mn: 0.05~0.5%, P: at most 0.04%, S: at most 0.03%, Al: at most 1.0%, N: at most 0.005%, and the balance: Fe and inevitable impurities and has an average grain diameter of 30 μm or more, and the member is produced by fabricating the steel sheet into a desired shape and then heat-treating it in a temperature range of 500°C or higher.

[Selected drawing] Fig. 2