CLAIMS

1. A steel plate comprising a chemical composition containing, in mass%,

C: 0.20 % or more and 0.70 % or less,

Si: 0.05 % or more and 1.00 % or less,

Mn: 15.0 % or more and 35.0 % or less,

P: 0.030 % or less,

S: 0.0200 % or less,

Al: 0.010 % or more and 0.100 % or less,

Cr: 0.5 % or more and 8.0 % or less, and

N: 0.0010 % or more and 0.0300 % or less, with the balance being Fe and inevitable impurities,

wherein at least 60 % of the contained Cr is solute Cr.

2. The steel plate according to claim 1, wherein the chemical composition further contains, in mass%, at least one selected from the group consisting of

Nb: 0.003 % or more and 0.030 % or less,

V: 0.01 % or more and 0.10 % or less, and

Ti: 0.003 % or more and 0.040 % or less.

3. The steel plate according to claim 1 or 2, wherein the chemical composition further contains, in mass %, at least one selected from the group consisting of

Cu: 0.01 % or more and 0.50 % or less,

Ni: 0.01 % or more and 0.50 % or less,

Sn: 0.01 % or more and 0.30 % or less,

Sb: 0.01 % or more and 0.30 % or less,

Mo: 0.01 % or more and 2.0 % or less, and

W: 0.01 % or more and 2.0 % or less.

4. The steel plate according to claim 1, 2, or 3, wherein the

chemical composition further contains, in mass %, at least one selected from the group consisting of

Ca: 0.0005 % or more and 0.0050 % or less,

Mg: 0.0005 % or more and 0.0100 % or less, and

REM: 0.0010 % or more and 0.0200 % or less.

5. A method for manufacturing a steel plate, comprising:

heating a steel raw material having the chemical composition according to any of claims 1 to 4 to 1000 °C or higher and 1300 °C or lower; subsequently hot rolling the steel raw material with a rolling reduction ratio of 3 or more and 30 or less, a finish rolling temperature of 750 °C or higher, and a time for which a material to be rolled resides within a temperature range of 600 °C to 950 °C of 30 minutes or less to obtain a hot-rolled steel plate; and then, cooling the hot-rolled steel plate at an average cooling rate of 3 °C/s or more within a temperature range of 600 °C to 700 °C,

thereby obtaining the steel plate wherein at least 60 % of the contained Cr is solute Cr.