WHAT IS CLAIMED IS:

1. A low-hydrogen covered electrode including a steel core wire covered with a coating, wherein

the coating coverage ranges from 10% to 40% by mass of the electrode, and

the coating contains on a coating mass basis

a metal carbonate (based on CO_2): 10% to 30% by mass,

a metal fluoride (based on F): 2% to 13% by mass,

TiO_2: 1% to 7% by mass,

at least one selected from the group consisting of Si, Si alloys, and Si oxides (based on Si): 1.9% to 11.7% by mass in total,

Ni and/or a Ni alloy (based on Ni): 0.5% to 3.5% by mass in total,

Mo and/or a Mo alloy (based on Mo): 0.11% to 0.45% by mass in total,

at least one selected from the group consisting of B, B alloys, and B oxides (based on B): 0.02% to 0.25% by mass in total,

Ti and/or a Ti alloy (based on Ti): 0.2% to 1.0% by mass in total,

at least one selected from the group consisting of Al, Al alloys, Mg, and Mg alloys (based on Al and Mg): 0.2% to 1.8% by mass in total,

Mn and/or a Mn alloy (based on Mn): 1% to 7% by mass, and

~~Fe: 3% to 11% by mass.~~ Fe and/or a Fe alloy (based on Fe): 3% to 11% by mass.

2. The low-hydrogen covered electrode according to Claim 1, wherein the coating satisfies the following mathematical formula (A): wherein [Ni] denotes the Ni and Ni alloy content (based on Ni), [Ti] denotes the Ti and Ti alloy content (based on Ti), [B] denotes the B, B alloy, and B oxide content (based on B), [Mo] denotes the Mo and Mo alloy content (based on Mo), and [Mn] denotes the Mn and Mn alloy content (based on Mn).

$$0.3 \leq \frac{[\mathrm{Ni}] + [Ti] + [B]}{[Mo] + [Mn]} \leq 1.2 \quad \cdots \quad (\mathrm{A})$$

3. The low-hydrogen covered electrode according to Claim 1 or 2, for use in welding of a high-strength steel having a tensile strength of 550 MPa or more.