CLAIMS

1. A reflective mask blank comprising a multilayer reflective film and a phase shift film for shifting a phase of EUV light on a substrate in this order,

wherein the phase shift film has a thin film of a material comprising metals containing ruthenium (Ru) and at least one or more elements of chromium (Cr), nickel (Ni), aluminum (Al), silicon (Si), vanadium (V), germanium (Ge), tin (Sn), tellurium (Te), hafnium (Hf), and tungsten (W).

2. The reflective mask blank according to claim 1, wherein the crystal structure of the phase shift film is amorphous.

3. The reflective mask blank according to claim 1 or 2, wherein the phase shift film is a thin film of a material comprising metals containing ruthenium (Ru) and at least one or more elements of chromium (Cr), and nickel (Ni).

4. The reflective mask blank according to claim 3, wherein a composition ratio of the Ru and the Cr (Ru : Cr) is 15 : 1 to 1 : 20.

5. The reflective mask blank according to claim 3, wherein a composition ratio of the Ru and the Ni (Ru: Ni) is 20 : 1 to 1 : 4.

6. The reflective mask blank according to any one of claims 1 to 5, further comprising a protective film between the multilayer reflective film and the phase shift film, wherein the protective film is made of a material containing silicon (Si) and oxygen (O).

7. A reflective mask comprising a phase shift pattern obtained by patterning the phase shift film in the reflective mask blank according to any one of claims 1 to 6.

8. A method of manufacturing a reflective mask in which a phase shift pattern is formed by patterning the phase shift film of the reflective mask blank according to any one of claims 1 to 6, by a dry etching gas comprising a chlorine-based gas and an

oxygen gas.

9. A method of manufacturing a semiconductor device, the method comprising placing the reflective mask according to claim 7 in an exposure apparatus comprising an exposure light source that emits EUV light, and transferring a transfer pattern to a resist film formed on a transferred substrate.