Abstract

To enable effective reduction of steepness sections in line beam irradiation, provided are a laser line beam improvement apparatus and a laser processing apparatus, the laser line beam improvement apparatus including: a first shielding portion (first shielding plates 20) that is arranged at a position relatively far from an object to be processed (silicon film 100) on an optical path of a line beam 150 emitted to the object to be processed and that shields transmission of major axis end sections of the line beam 150; and a second shielding portion (second shielding plates 21) that is arranged at a position relatively near the object to be processed and that further shields the transmission of the major axis end sections of the line beam 150 after the shielding of the transmission of the major axis end sections by the first shielding portion, the laser processing apparatus including the laser line beam improvement apparatus, wherein the first shielding portion is arranged outside of the processing chamber 2, between a condensing lens 21c in a final stage of an optical system and an introduction window 6, and the second shielding portion is arranged in the processing chamber 2.