ABSTRACT

METHOD FOR FORMING TRENCH ISOLATION STRUCTURE

This invention provides a base material with a siliceous film, which is free from voids and cracks in the interior of groove(s) in a trench isolation structure and has excellent adhesion between a substrate and a siliceous film, and a process for producing the base material with a siliceous film.

A trench isolation structure is formed by a method comprising coating a silicon-containing polymer solution onto a substrate having trench isolation groove(s) of which the surface has been continuously covered with a silicon nitride liner film, and heat treating the coated substrate at a temperature of from 900°C to 1200°C. The base material with a siliceous film is provided using the method.