CLAIMS

1. A gas purification filter comprising a filter body formed by a fiber cloth and a gas purification catalyst supported by the filter body,

wherein the gas purification filter has a porosity of not less than 6% and not greater than 20%, the porosity representing a volume of voids occupying a space per unit volume.

2. The gas purification filter according to claim 1,

wherein the porosity is not less than 7% and not greater than 17%.

3. The gas purification filter according to claim 1 or 2,

wherein the filter body has the porosity of not less than 55% and not greater than 82%, and

wherein the gas purification catalyst has a mean particle size D_{50} of not less than 1 μm and not greater than 250 μm.

4. The gas purification filter according to any one of claims 1 to 3,

wherein the filter body has a basis weight of not less than 500 g/m^2 and not greater than 1,200 g/m^2.

5. The gas purification filter according to any one of claims 1 to 4,

wherein a fiber contained in the filter body includes any one of polyester fiber, polyamide fiber, polyphenylene-sulfide fiber, polyacrylic fiber, polypropylene fiber, polyimide fiber, glass fiber, and polyfluoroethylene fiber.

6. The gas purification filter according to claim 5,

wherein the fiber has a largest diameter of not greater than 15 μm in a fiber cross-section.

7. A method for producing a gas purification filter including a filter body formed by a fiber cloth and a gas purification catalyst supported by the filter body, the method comprising:

a preparation step of preparing the filter body;

a mean particle size decision step of deciding, based on a porosity of the prepared filter body, a mean particle size D_{50} of the gas purification catalyst such that the gas purification filter has the porosity of not less than 6% and not greater than 20%; and

a support step of supporting the gas purification catalyst having the decided mean particle size D_{50} by the filter body.

8. The method for producing the gas purification filter according to claim 7,

wherein the support step is performed by a spray method.

9. A gas purification system for purifying an exhaust gas from a combustion device, comprising:

a gas purification device inside which the gas purification filter according to any one of claims 1 to 6 is disposed.

10. The gas purification system according to claim 9,

wherein the gas purification catalyst includes a denitration catalyst, and

wherein the gas purification system further comprises a supply device for supplying a reducing agent for nitrogen oxide to a gas flowing upstream of the gas purification filter.