

SILICON NITRIDE POWDER FOR MOLD RELEASE AGENT OF CASTING
MOLD FOR CASTING POLYCRYSTALLINE SILICON INGOT AND METHOD
FOR MANUFACTURING SAID SILICON NITRIDE POWDER, SLURRY
CONTAINING SAID SILICON NITRIDE POWDER, CASTING MOLD FOR
5 CASTING POLYCRYSTALLINE SILICON INGOT AND METHOD FOR
MANUFACTURING SAME, AND METHOD FOR MANUFACTURING
POLYCRYSTALLINE SILICON INGOT USING SAID CASTING MOLD

ABSTRACT

10 Provided is a silicon nitride powder for a mold
release material of a casting mold for casting a
polycrystalline silicon ingot capable of preparing a
polysilicon ingot having a high photoelectric conversion
15 efficiency at low cost. Provided is a silicon nitride
powder for a mold release agent of a casting mold for
casting a polycrystalline silicon ingot and a method for
manufacturing the silicon nitride powder, a slurry
containing the silicon nitride powder, a casting mold for
20 casting a polycrystalline silicon ingot and a method for
manufacturing the same, and a method for manufacturing a
polycrystalline silicon ingot cast using the casting
mold, the specific surface area being 5 to 40 m²/g, FS/FSO
being 8 to 30 and FS/FIO being 22 or higher, where FSO
25 (mass%) is the content ratio of oxygen present in the
particle surface layer, FIO (mass%) is the content ratio
of oxygen present inside the particles, and FS (m²/g) is
the specific surface area, and the ratio D10/D90 between
the 10-vol% diameter (D10) and the 90-vol% diameter (D90)
30 being 0.05 to 0.20 in a measurement of grain size
distribution.

No suitable figure