

SEED RETAINING MEMBER AND METHOD OF MANUFACTURING POLYCRYSTALLINE SILICON USING THE SEED RETAINING MEMBER

ABSTRACT

5 A seed retaining member has a recessed portion for breaking and separating
formed at an arbitrary location and thereby allows stress concentration to occur at the
recessed portion when applying a breaking load, to enable the seed retaining member to
break with a smaller load than conventional. A seed retaining member and method of
manufacturing polycrystalline silicon using the seed retaining member are provided, that
10 can prevent a crack from propagating in an unintended location in the seed retaining
member by allowing the crack to propagate along the recessed portion, and can reduce a
workload in a separation work of the seed retaining member and polycrystalline silicon.

A seed retaining member (6) for retaining a lower end portion of a seed (4)
serving as a seed rod is made of graphite and disposed at a bottom portion of a furnace for
15 producing polycrystalline silicon by a Siemens method. A groove (16) for breaking and
separating is formed in an outer peripheral surface of the seed retaining member (6).
The seed retaining member (6) has a columnar base portion (6a) having a first fitting hole
(10) for inserting an electrode portion (5), a cylindrical body portion (6b) having a
smaller diameter than the base portion (6a), and a conical frustum-shaped tip portion (6c)
20 joined to the body portion (6b) and having a second fitting hole (13) for inserting a lower
end portion of the seed (4).

Figure 3