

Creeping up in Growth of Crystal from Solution

Shooshtarian, M.A.

Material Sci. Dep. School of Engineering, Shiraz University, Shiraz, IRAN

Key Words: *Crystal Growth, Growth from Solution, Creeping up*

Abstract: Single crystals have been grown from ancient Egypt. Crystal growth started in the 20th century and developed from 1940 until now. Four methods have been used to prepare single crystals: growth from solution, melt, vapour, and solid. Every method has its own advantage, disadvantage and problems. One of the problems in growth from solution is creeping up.

Creeping up is undesirable growth of thin layer on the wall of crystal growth bath. Sometimes this layer grows very rapid and so fills the bath, and prevents growth. In this paper, these subjects are considered

1. Why does creeping up occur?
2. What parameter affect on it?
3. What in the best way for its prevention?

Experiments show that creeping up is affected by wetting angle between solution and bath wall, viscosity of solution, agitation, additives, and shape of bath.