

Abnormally large power values of power law creep estimated from boudin analysis

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We estimated the power value of power law creep from boudins of three localities of different metamorphic conditions, the main deformation mechanism of one locality is surely pressure solution creep and other two may be same; the power values are 7, 11 and 26. This abnormally large values will be realized by the phase transition of ultra-thin water film between crystal grains, from structured to bulk and free. This will be induced by the change in the width of water film controlled by the discharge rate of screw dislocations to crystal surfaces, resulting highly stress dependent strain rate.