

PROJECT LEADERS

C Vuiik

RESEARCH THEME

Complex dynamics of fluids

PARTICIPANTS

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COOPERATIONS

TNW, Philips

FUNDED

STW, Philips

1st - 2nd 50% 3rd 50%

START OF THE PROJECT

2002

INFORMATION

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PROJECT AIM

Modelling of (re-) writing of optical disks. Writing is modelled by a melting and solidification of a phase change layer. Rewriting is done by a recrystallization.

PROGRESS

A mathematical model has been developed to describe writing on optical storage disks. The moving boundary that occurs can be modeled as a Stefan problem. New features in this problem are: a complicated layered 3D structure and the occurrence of a high energy source term. We solve the problem by a variant of the enthalpy formulation. To increase accuracy we have implemented a local refinement strategy into our finite element discretization (SEPRAN).

DISSERTATIONS

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SCIENTIFIC PUBLICATIONS

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