

The residual velocity method applied to a free boundary of welding problem.

A. Chakib¹, A.Nachaoui ² and *M.Nachaoui ^{1,2}

¹ Laboratoire de Mathématiques et Applications
Université Sultan Moulay slimane,
Faculté des Sciences et Techniques,
B.P.523, Béni-Mellal, Maroc.

² Laboratoire de Mathématiques Jean Leray,
UMR 6629, Université de Nantes/CNRS/ECN.
2 rue de la Houssinière, BP 92208, 44322
Nantes, France.

Key Words: *Free boundary problem; Shape optimization; velocity method ; welding problem.*

ABSTRACT

We are concerned with the problem of shape reconstruction of the inverse problem for welding process. We solve this problem using the residual velocity method. Some numerical discussion result are presented.

REFERENCES

- [1] Chakib, A.; Nachaoui, A.; Nachaoui, M. Approximation and numerical realization of 2D optimal design for welding problem. Submeated.
- [2] Donaldson, R. & Wetton, B., Solving steady interface problems using residual velocities, IMA Journal of Applied Mathematics. 71, 877-897, 2006
- [3] Zacharia, T.; Vitek J. M.; Goldak, J.A.; Debroy, T.A.; Rappaz, M., Modeling of Fundamental Phenomena in Welds , Modelling Simul.Mater.Eng.3(1995)