

# The HOTCH-POTCH Disk Element - Finite Element for Analysis of Reinforced Concrete Disks

Lars Jagd

Jens Christoffersen

M.P. Nielsen

# Table of Contents

Chapter 1 - Introduction .....	2
Chapter 2 - The HP Disk Element .....	3
2.1 General .....	3
2.2 The Element Stiffness Matrix .....	5
2.3 Sectional Forces .....	11
2.4 Comparison with Consistent Element Formulation .....	12
Chapter 3 - Implementation in FEM Programme .....	14
Chapter 4 - Numerical Examples .....	16
4.1 Fixed I-girder loaded by Shear Force .....	16
4.2 Fixed I-girder loaded by Bending Moment .....	18
4.3 Fixed solid beam loaded by Shear Force .....	19
4.4 Comparison between HP and Consistent Element .....	21
4.5 Disk loaded by Splitting Force .....	23
4.6 Multiple Span Deep Beam .....	26
Chapter 5 - Conclusion .....	30
Notation .....	31
References .....	33