

CONTENTS

Keynote papers

Unresolved river ice questions. **III**
G. D. Ashton

Mechanical properties between ice and various materials used in hydraulic structures. Adfreeze bond strength and abrasion rate. **XII**
H. Saeki

Proceedings

Session A

Key considerations in the design of offshore production facilities for arctic offshore conditions. **1**
O. T. Gudmestad, S. Løset

Paint coatings with higher hydrophobicity for protection against ice accretion. **9**
E. F. Itsko, A. S. Drinberg, L. G. Sidorova, N. A. Novoselova

Application fea for calculation of loading on an isolated structure from an ice cover at increase of temperature of ice. **15**
A.B. Ivchenko, S.P. Vasiliev

A study of dynamic drift ice events in a small bay. **21**
K. Wang, M. Leppäranta¹, T. Kõuts

Session B

Mathematical model of the oil slick spreading under the solid ice cover. **31**
A. Girghidov

Mathematical modelling of process of ice-snow cover forming in reservoir. **37**
A.A. Atavin, T.B. Grankina

Assessment location and parameters of ice jam on the basis of river water level regimes study. **44**
S. D. Vinnikov, L. S. Banshchikova

Session C

Ice station 2003 in Lake Pääjärvi, Finland. **48**
C. Wang, M. Leppäranta, K. Shirasawa, O. Huttunen, M. Ishikawa, T. Takatsuka

Session G

A field research programme to address ice engineering issues for the north caspian sea. **57**
K. R. Croasdale, G. Comfort, G. Crocker, M. Metge, R. Ritch

Special Session I	
Numerical simulation of sea ice growth and desalination. <i>C. Petrich, P. J. Langhorne, Z. Sun</i>	68
Some results of 3d numerical simulation of level ice-structure interaction. <i>K.N. Shkhinek, A.G. Jilenkov, S.M. Kapustiansky, T. Kärnä and S. Løset</i>	76
Special Session J	
Study of influence of strain rate during testing freshwater ice strength and crack-resistance by cracking and compression. <i>N.N. Gerdyukov, V.A. Sinitsyn, A.P. Bol'shakov, A.S. Eremenko, S.V. Sen'kova, D.M. Selina, S.N. Vasenin, A.V. Kal'manov, I.A. Trishchenkova</i>	84
Special Session K	
Difficulties imposed by ice conditions during HEP cascade construction on Kolyma River. <i>V.E. Belikov, L.I. Sulimova, A.N. Morozov</i>	89
Ice jamming studies and efficiency of protective measures on the Lena hydraulic model at Lensk. <i>V.A. Buzin, A.B. Klaven, Z.D. Kopaliani, V.N. Nikitin, V.I. Teplov</i>	94
Numerical simulation of hydrothermal regime of water intake of NPP to prevent ice impediments. <i>A. S. Sokolov</i>	102
Discussion. <i>A.Ye. Asarin</i>	111
Discussion. <i>I.N. Shatalina</i>	112
Discussion. <i>M.L. Monosov</i>	113
Session G	
Model computation results for a first-year ice ridge penetrating the seabed. <i>S.A. Vershinin, P.A. Truskov, K.V. Kouzmitchev</i>	117
Keynote paper	
The mission of the civil engineer in the movement of globalization. <i>P. D. Galloway</i>	122