

TECHNICAL REPORT 2/77

ASSOCIATE COMMITTEE ON AIR CUSHION TECHNOLOGY

PROCEEDINGS OF THE 10th CANADIAN SYMPOSIUM
ON AIR CUSHION TECHNOLOGY

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FOREWORD

It is a great pleasure to introduce this volume, the collected papers of the 10th Annual Air Cushion Vehicle Symposium presented by the Canadian Aeronautics and Space Institute, with the National Research Council of Canada's Associate Committee on Air Cushion Technology as co-sponsor. Our sincere thanks are due to Mrs. Joan E. Edel of the Projects Office in the Division of Mechanical Engineering in the NRC for her efforts in typing and assembling the papers that appear in this volume.

Canada entered the ACV field some years after the British and French under the leadership of "chiefly" Cockerel and Jean Bertin, started this exciting business of "flying at half-inch altitude". However, while the British and French have looked upon the ACV primarily as a high-speed marine ferry and railroad technique, Canada has pursued a different course.

The Canadian terrain, much of it ecologically fragile, changing its nature with the season, and in vast areas devoid of good roads and often of any roads at all, has imposed a different pattern on us; one may say it has given us opportunities for this technology which are not available in the U.K. or Europe.

With the notable exception of "Voyageur", a primarily over-water vehicle, the Canadian landscape has led us to regard the ACV as a load-spreading device to carry heavy freight over weak and variable terrain, including the weak roads which are being called on to carry ever-increasing freight as industry moves north.

This 10th Symposium surveys this picture, not as a researcher's dream or a politician's "promised land", but as hard engineering and economic reality. The announcement at the opening dinner by the Alberta Government of a contract to build and operate an air cushion ferry across the Peace River in 1977 set the keynote of the whole meeting. It is no longer the case that "it is theoretically possible to break ice with

an ACV", the Canadian Coast Guard has been breaking ice with Iceater and Voyageur for two years now, and tell the story in films and statistics. Northern Transportation Company Limited has carried over 13,000 passengers and 4,500 tons of freight over 50,000 arctic miles, mainly for the oil industry.

On a personal note, I have been privileged to watch this unfolding scene from three separate windows, as this year's Chairman of the ACV section of the CASI, as a member of the NRC's Associate Committee, and as an NRC research engineer working in the ACV field. I can say that the past years have been exciting, but I know that the years to come will be even more so, and I hope that some of this interest and excitement will be communicated by the papers in this volume. As a collection of data they are excellent, but I think they contain more than data. They are the logbooks of today's explorers, on the frontiers of possibility.

Howard S. Fowler, Chairman
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TABLE OF CONTENTS

	<u>Page</u>
Foreword	i
List of Participants	1

S E S S I O N I

CHAIRMAN'S COMMENTS - G.M. Parkes	6
A PROGRESS REPORT ON AIR CUSHION TECHNOLOGY IN CANADA 1975/76 ... H.S. Fowler, National Research Council of Canada	7
1976 - A SIGNIFICANT YEAR FOR U.K. HOVERCRAFT	10
J.E. Rapson, Hovercraft Development Limited	
A REVIEW OF THE REPORT OF THE ARB SPECIAL COMMITTEE ON HOVER- CRAFT STABILITY AND CONTROL	30
J.G. Wraith, Civil Aviation Authority	
LOW TEMPERATURE EFFECTS ON THE ABRASION BEHAVIOUR OF COATED FABRICS	44
R.C. Tennyson and A.A. Smailys, University of Toronto Institute for Aerospace Studies	
TESTS ON THE AIR CUSHION LANDING SYSTEM BUFFALO AIRCRAFT	60
Captain Tom Clapp, U.S. Air Force	

S E S S I O N I I

CHAIRMAN'S COMMENTS - C.R. Silversides	65
REQUIREMENTS FOR THE LA CRETE FERRY - AN A.C.V. PROPOSAL	66
A.R. Rogers, Alberta Transportation	
AIR AND WATER CUSHION LIFT SYSTEMS	74
G.M. Parkes, Hoverlift Systems Limited	
AIR CUSHION ASSIST - PRACTICAL APPLICATION IN ALBERTA	80
H.H. Hendrickson, Alberta Transportation	
ON-ROAD AIR CUSHION ASSIST - WHERE IS IT WHEN WE NEED IT?	82
D. Eyre, Saskatchewan Research Council	
THE PRESENT STATUS OF AIR CUSHION ASSIST IN CANADA	92
D. Jones, Jones, Kirwan & Associates Limited	

THE FUTURE OF AIR CUSHION (AC) ASSIST IN CANADA	100
H.S. Fowler, National Research Council of Canada	

S E S S I O N I I I

CHAIRMAN'S COMMENTS - J. Doherty	103
CONTINUING ADVANCES WITH AIR CUSHION ICEBREAKING	105
M.A. Ball, Transport Canada, Air Cushion Vehicle Division, Canadian Coast Guard	
THE HIGH-SPEED METHOD OF AIR CUSHION ICEBREAKING	133
R.W. Robertson, Transport Canada, Canadian Coast Guard	
ECONOMIC AND SOCIAL ASPECTS OF ICEBREAKING ON THE ST. LAWRENCE SEAWAY	141
T.N. Hall, Dominion Marine Association	

S E S S I O N I V

CHAIRMAN'S COMMENTS - R.D. Hunt	147
THE U.S. NAVY'S LARGE SURFACE EFFECT SHIP	148
Commander Jerome J. Fee and Eugene H. Handler, U.S. Navy	
SHIP TO SHORE LIGHTERING WITH THE VOYAGEUR	165
R.W. Helm, Bell Aerospace Canada Textron, Division of Textron Canada Limited	
THE YUKON FERRY OPERATION	176
J.E. Ireland, Mackley Hover Peterborough Ltd.	

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