
Overview

The Snow Cruiser was a mobile research laboratory developed by Armour Research Foundation (ARF) to be used by Adm. Richard E. Byrd on his third expedition to Antarctica in 1939. The vehicle was driven across land from Chicago where it was built to the East Coast of the United States where it was loaded onto a ship and taken to “Little America” in the Antarctic. Dr. F. Alton Wade was the vehicle’s captain. When Adm. Byrd was recalled to the United States, the Snow Cruiser was left in Antarctica. In 1958, it was found “under 14 feet of ice and snow,” according IITRI: A Fifty Year Portrait, 1936 – 1986.

Alfred L. Eustice received a degree in Electrical Engineering in 1907 from Armour Institute of Technology (a predecessor college of Illinois Institute of Technology).

Armour Research Foundation (ARF) was one of the first private, not-for-profit contract research laboratories in the United States. Begun in Chicago in 1936 by Armour Institute of Technology (AIT), ARF was acquired by Illinois Institute of Technology in 1940 when IIT was created by the merger of AIT and Lewis Institute. Re-named Armour Research Foundation of Illinois Institute of Technology, it was later reorganized as the IIT Research Institute (IITRI). Under all its iterations, the laboratory conducted research for commercial and government sources, expanding to an international operation.

Materials in UASC

Processed Collections

031.06.06  Snow Cruiser Photos, Elbert M. Decker Papers
Six 8 x 10” black and white photos dated 1939 of Snow Cruiser during its test run and public exhibit in Soldier Field. Note that copyright restrictions limit reproduction and use of these images. Item listing:
1. News reel cameraman photograph the Snow Cruiser.
2. Snow Cruiser with people viewing it.
4. View of Snow Cruiser with man standing on top.
5. View showing ramped front underside.
6. Close-up view of tire and hydraulic column used to life wheel.

1998.017  Lewis Institute Records
One item: Ad in Bulletin of the Western Society of Engineers about a presentation by Harold Vagtborg scheduled for Nov. 16, 1939 on the Snow Cruiser.

031.06.02  Snow Cruiser Film
Black and white silent film: From Armour Institute to Little America—With Byrd and Poulter. Probably produced by Armour Research Foundation for
promotional purposes. Contains only a few feet of footage of the Cruiser being driven down a street (probably from Pullman shops to Grant Park in 1939). Also contains footage of the plane taking off from unidentified airport. Balance of film is apparently stock footage added to suggest the Cruiser’s transport to Antarctica. Ca. 9 minutes long. Item is available for viewing, in VHS video cassette format, in the IIT Archives only.

024.04.01 Henry T. Heald President’s Papers
Box 83/Folder: Research Foundation of A.I.T., Antarctic Snow Cruiser, 1939-1940. Includes photos of the model; diagrams of floor plan and cut-away drawings of interior.

031.06.03 Snow Cruiser in Life Magazine
Issue of Life magazine from Nov. 13, 1939 with one-page article (pg. 28), “Giant Snow Cruiser Comes to Grief in Ohio Cow Pasture,” citing problems encountered on its trial run from Chicago to Boston; includes four photographs.

1998.130 Non-Serial Publications
Box 32 contains one folder titled Snow Cruiser

1998.160 J. C. Peebles Papers
Unpublished manuscript A History of Armour Institute of Technology by James Clinton Peebles concerning the history of Armour Institute of Technology and Armour Research Foundation; see pages 131-134 for coverage of the Snow Cruiser.

1998.186 Armour Institute of Technology Records
Box 4/Folder 21 includes a letter dated June 2, 1939, invitation and tickets to commencement for J.M. Frank, president ILG Electric Ventilation to commencement. Frank’s 5/29/1939 acceptance with note “…the Snow Cruiser matter is…confidential.” Box 4/Folder 22 includes a memo dated Aug. 8, 1939: Alexander Schreiber AIT re “Snow Cruiser” designed by Research Foundation AIT staff; this memo concerned with publicity. Also contains additional information on Alfred LeRoy Eustice.

031.08.02 Armour Research Foundation Photographs
Negatives and contact prints of black and white images documenting scientists and research projects of Armour Research Foundation (later, IITRI). Box 5 includes 2 images identified as photo numbers K1083 and K 1084 -- Snow cruiser for Byrd’s expedition to Antarctic. Contains images of Richard E. Byrd.

031.06.01 Snow Cruiser Collection
One folder of miscellaneous materials about the Snow Cruiser, primarily a 28-page photocopy of The Snow Cruiser: The Story of Its Conception and Construction and the Part it Will Play in the Expedition of the United States Antarctic Service by Alexander Schreiber, Public Relations Counsel, Research
Foundation of Armour Institute of Technology (Project No. 1-89 [?]) Copyright 1939, Armour Research Foundation. Also miscellaneous news clippings.

1998.270  
*Armour Engineer and Alumnus*

031.07.01  
*Irwin Fieldhouse Collection*
Oral interviews of Prof. Irwin Fieldhouse, the first employee of Armour Research Foundation. Primarily his reminiscences of people and projects connected to ARF and IITRI. 3 tapes; ca 96 page transcript. Each tape is ca. 60 minutes long. The Snow Cruiser is discussed on tape 1, pages 11 – 15 of the transcript. Also contains information on Harold Alfred Vagtborg.

031.06.05  
*Snow Cruiser Collection*
Cancelled stamp cover commemorating the Snow Cruiser’s arrival at the South Pole; cancellation dated May 6, 1941, Boston, Mass. Cover shows drawing of Snow Cruiser with plane mounted on top. Markings: on obverse: *The Snow Cruiser Reaches the South Pole/Defense plans halted/Byrd Antarctic Expedition III/in south polar regions/Lat. 78º 30' S. Long. 163º 30' W./Research Foundation of the Armour Institute of Technology*. On reverse: *Registered No. 6932/Carried from Little America by U. S. S. North Star.*

031.03.02  
*IITRI Collection*
*IITRI: A Fifty Year Portrait, 1936 – 1986* being a 78-page 50th anniversary retrospective history (published 1986). Includes a narrative and timeline account of various ARF projects, including the Snow Cruiser.

2001.31  
*IIT Centennial Collection*
*IIT Campus Roots Quiz* 8 being a one-page flyer, dated ca. 1990, with information about the Snow Cruiser’s history.

2002.03  
*Snow Cruiser In Popular Mechanics*
Issue of *Popular Mechanics* (October, 1939, Vol. 72, No.) with cover image (color drawing) and article on the Snow Cruiser explaining how the retractable wheels work. Includes illustrations. Pages 494, 495, and 151A.

1998.199  
*Unprocessed Photos*
Snow Cruiser appears in Box BB and Box RR-1
Eustice appears in Box RR-1
Poulter appears in Box HH and Box RR-2
Vagtborg appears in Box JJ/V and Box TT-1
Byrd appears in Box RR-1
Wade – no known photos
032.03.06  *Deceased Donor Files - Part 1*
Files on Alfred LeRoy Eustice, and Harold Alfred Vagtborg

032.07.05  *Marvin Camras Papers*
Information on Thomas C. Poulter and Harold Alfred Vagtborg as colleagues of Camras

032.07.07  *Marvin Camras Wire Recordings*
Additional information on Thomas C. Poulter

1998.062  *Willard Hotchkiss Papers*
Additional information on Alfred LeRoy Eustice

1998.049  *Henry T. Heald President’s Papers*
Additional information on Thomas C. Poulter

1999.031  *Viewbook*
Additional information on Thomas C. Poulter

031.03.02  *IIT Research Institute Printed Material*
Additional information on Harold Alfred Vagtborg and F. Alton Wade

1999.042  *Buildings and Grounds Collection*
Additional information on Richard E. Byrd

**News Releases**

1/1940  Harold Vagtborg, Snow Cruiser Lecture at Glen Ellyn College Club
1/1940  Harold Vagtborg, Snow Cruiser Lecture at Woodlawn Women’s Club
1/1940  Harold Vagtborg, Snow Cruiser Lecture at Medinah Shrine Lunch Club
2/1940  Harold Vagtborg to speak at Chief Engineers Association of Chicago
2/1940  Harold Vagtborg to Speak at Advertising Men’s Post No. 38 American Legion
5/1940  Dr. Thomas C. Poulter at Wisconsin State Bankers Convention
6/1940  Wisconsin State Bankers Convention – Address of Dr. T. C. Poulter
6/1940  Citation for Alfred L. Eustice, President of Economy Fuse and Manufacturing Company
9/1940  With the Snow Cruiser in the Antarctic Dr. T. C. Poulter – Field Museum
10/1940  Dr. T. C. Poulter
11/1940  Dr. T. C. Poulter – Academy of Arts & Sciences, Carnegie Institute
11/1940  Dr. T. C. Poulter – Illinois state Museum, Springfield Illinois
12/1940  Dr. T. C. Poulter – Snow Cruiser Lectures under the Auspices of Washington University
12/1940  Dr. T. C. Poulter – Snow Cruiser Lecture Masonic Consistory, South Bend, Indiana
1/1941  Harold Vagtborg
3/1941 Harold Vagtborg, South American Tour
5/1941 Harold Vagtborg, Director of ARF Returns from South American Tour of National Research Council
11/1941 Harold Vagtborg, director of ARF, Addresses Chicago Woman’s Club
3/1942 Harold Vagtborg announces those to make up team headed for Argentina industrial survey
4/1942 Harold Vagtborg, director of ARF looks for help in feeding lambs
6/1942 Harold Vagtborg, director of ARF speaks to Funeral Directors’ Association
4/1943 Harold Vagtborg addresses Peoria section of Society of Automotive Engineers
10/1943 $10,000 endowment established in memory of Alfred L. Eustice
11/1943 Alvin Coyle first student to receive Alfred L. Eustice memorial scholarship
2/1944 Harold Vagtborg speaks to Supervisors Club of Republic Steel Corporation
2/1944 Harold Vagtborg speaks at meeting of Great Lakes Power Club
4/1944 Harold Vagtborg to speak to Boy Scouts and Bond Club
5/1944 Harold Vagtborg and Maurice Holland leave to two week series of inspections and conferences in Mexico
11/1944 Harold Vagtborg talk on wire recording device well attended
11/1944 Harold Vagtborg appointed president of Midwest Research Institute
11/1944 Dr. Jesse Hobson appointed director of ARF to replace Harold Vagtborg
12/1944 Harold Vagtborg honored at dinner by trustees and senior members of IIT staff
2/1945 Donald Slager winner of Eustice scholarship
4/1945 ARF promotes three – Thomas Poulter, Martin Heeren and James Carlisle
7/1945 Lt. Cmdr Thomas C. Poulter receives annual recognition award for outstanding contribution in scientific and engineering research at ARF
9/1945 Harold Vagtborg address opening session of conference
4/1948 Dr. Thomas C. Poulter, designer of “Snow Cruiser,” used by Admiral Byrd speaks.

Books


Additional External Materials

Web Resources

Information about the Snow Cruiser is widely available online, particularly useful is: http://www.joeld.net/snowcruiser/snowcruiser.html.
Also see articles in Technology News (student newspaper). An online index is available at http://archives.iit.edu/technews/. Search Snow Cruiser, Poulter, Eustice, Vagtborg, etc.

Further Reading

Check listings under “Byrd” in the 1939 New York Times Index.


“Snow Cruiser, A Mobile Base for Antarctica” Scientific America, 192:25, Jan. 1940.

“Snow Cruiser to Explore Antarctic” Popular Mechanics, 72:494-50+; October 1939.

“Capt. Wade’s log (daily journal) of the Snow Cruiser’s performance in Antarctica is in the Library of Congress.” According to Prof. Fieldhouse.

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