SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

Volume 52 Fall 2023 Number 4

Akron, Ohio—SIA 2023 Fall Tour

IA in the Rubber Capital of the World

This year's Fall Tour brought together a group of over 50 SIA members and guests to explore Akron and environs in Northeast Ohio, Sept. 20–22, 2023. The SIA first visited Cleveland and Akron for the 1986 Annual Conference. Akron (Greek for "summit") owes its existence to its location on the crest of the north-south continental divide, which gave the city ample falling water to power industry. It made Akron a key transportation hub when the cross-Ohio canal system was built in the 1820s and 30s. As the world's leading producer of car and truck tires, Greater Akron was America's wealthiest small city through much of the early automotive era. The shift from bias to radial tires in the 1980s brought an end to Akron's dominance in tire manufacturing, and today, only limited, specialized tire production is found in Akron. However, the city remains a major center for engineering, research, and manufacturing related to rubber and polymers.

The Fall Tour explored these elements of Akron's industrial heritage, with tours of its historic canal system, and rubber, polymer, and aviation industries.

For those early birds who arrived in Akron by mid-afternoon, the three-day event began with a walking tour of the **East End**, led by Paul Harris, general manager. Once the campus of the historic Goodyear Tire and Rubber Co., the East End is a 1.4 million-sq.-ft., mixed-use, redevelopment initiative. The Hilton Garden Inn, located within this complex and within view of the classic Goodyear neon sign, served as the SIA's hotel. In addition to the hotel, the complex includes apartments, commercial space, entertainment and event spaces, retail, offices, and sports facilities.

The official kick-off of the Fall Tour was a visit to the **Cascade Locks Park** followed by the opening reception. The park preserves and promotes the industrial, commercial, and cultural heritage along the Ohio & Erie Canal. Its main feature is the waterway which channels the Ohio

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Tony Meadow

Pathfinder *travels along the Cuyahoga River under the Hope Memorial Bridge.*

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& Erie Canal through the six staircase locks Nos. 10–16. The SIA's tour began at **Cuyahoga Valley Scenic RR's Akron Northside Station**. From there, volunteers led us along the Towpath Trail to the **Mustill Store & Museum**. Along the trail, we viewed the locks, a well-timed train passing overhead, foundations of the Beech Street Steam Plant, and several unused, decaying industrial buildings. Before arriving at the museum, we also saw a large outdoor display interpreting Schumacher's Cascade Mills. The Mustill Store & Museum at the end of the trail provided information about the area's history as influenced by the canals, and about the excavations and renovations that were done to repurpose the store as a museum and visitor center. A highlight was a large mural of the town in its canal-era heyday of the 1870s.

From the museum, it was a short walk to the reception at **Trailhead at Cascade Lofts**, next to Lock 15 Brewing. The brewery's beers were sampled by many during the reception along with excellent local pizza and hors d'oeuvres. SIA President Arron Kotlensky welcomed everyone and gave a brief introduction. Local Ohio organizers Ron Petrie and Mary Starbuck presented an overview of the upcoming tours and activities. Tony Troppe, a developer who has purchased the Ace Rubber Co. building for adaptive reuse, gave an enthusiastic talk about Akron's industrial heritage and its potential for redevelopment.

Thursday's touring began at the **University of Akron Polymer Center**. After viewing a large sculpture by glass artist Dale Chihuly at the entrance, we were split into three groups for rotating presentations: the Goodyear Polymer Center Labs, National Polymer Innovation Center production lines, and a presentation on the history of rubber. The main host was John Fellenstein, Content Specialist, Akron Global Polymer Academy.

At the Polymer Center Labs, researchers demonstrated and explained a variety of chemistry laboratory equipment, most with analyses in process. In one room, research on plastics pollution was ongoing, using a machine that allows separation of smaller and larger molecules, for example, to investigate processes that break plastics down into smaller components or molecules. Another room featured equipment used to analyze the performance of newly developed polymers. The 4th-floor labs are mainly devoted to studying UVA degradation, friction, and surface interactions such as road/tire interfaces.

At the National Polymer Innovation Center (NPIC), we toured the High Bay Mfg. Lab. We first viewed an extruding machine that produces sheets of polymer and adds coatings to the top and/or bottom of the sheets. Another machine is used to make polymers harder or more pliable. We also viewed injection molding equipment and a stretching apparatus that is used to generate very thin films and also to perform stress tests. Our scientist-guide demonstrated this for us, placing a sample into the machine. It returned broken, but she pointed out that sometimes in research the intent is to stretch the material to its breaking point.

For the third event, the group gathered in an auditorium

Aron Eisenpress

Detail of the Mustill Store mural showing the Cascade Mills at the Locks.

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, IA, published biannually. The SIA through its publications, conferences, tours, and projects encourages the study, interpretation, and preservation of historically significant industrial sites, structures, artifacts, and technology. By providing a forum for the discussion and exchange of information, the Society advances an awareness and appreciation of the value of preserving our industrial heritage. Annual membership: individual $50; household (joint) $55; full-time student $20; institutional $75; contributing $100; sustaining $150; corporate $500. For members outside of North America, add $10 surface-mailing fee. Send check or money order payable in U.S. funds to the Society for Industrial Archeology to SIA-HQ, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-1889; email: *sia@siahq.org*; website: *www.sia-web.org*.

Mailing date for Vol. 52, No. 4 (Fall 2023), December 2023. ISSN 0160-1067. If you have not received an issue, apply to SIA-HQ (address above) for a replacement copy.

The *SIA Newsletter* welcomes material and correspondence from members, especially in the form of copy already digested and written! The usefulness and timeliness of the newsletter depends on you, the reader, as an important source of information and opinion.

TO CONTACT THE EDITOR: Marni Blake Walter, Editor, *SIA Newsletter*, 11 Esty Rd., Westmoreland, NH 03467; *sianeditor@siahq.org*.

for a presentation on the history of rubber (accompanied with the historical technology of handwritten notes displayed via an overhead projector). The speaker noted that Charles Goodyear invented vulcanization in 1839, but the Goodyear company started long after that and was merely named in his honor. In 1962, Goodyear released a commercially available synthetic duplicate of natural rubber, called Natsyn, and the speaker showed a sample of the original material.

The next stop was **Bounce Innovation Hub**, but along the way, we first passed by the **Quaker Square silos**. Part of the original Quaker Oats factory, the silos were repurposed as a hotel in the 1980s, and most recently were used as dorm rooms for Univ. of Akron students. Bounce is located in the former B.F. Goodrich factory complex. Our group gathered at the reception area, which included a cafe featuring a mural of the Goodrich factory. Rose Saborse, Director, Community & Partnerships, welcomed us and gave an overview of Bounce's origins as a nonprofit organization founded in Jan. 2018. Its facility comprises more than 300,000 sq. ft. of community-oriented co-working, event, meeting, and professional office spaces.

While at Bounce, we visited one of the resident businesses, **S4 Mobile Laboratories** (makers of a mobile spectroscopy instrument that can measure the chemical content of the soil as a function of depth), and the Workshop, a makerspace where a wide variety of equipment and many materials are available, including a high-tech 3D printer, laser engraver, product photography station, sewing machines and an industrial-sized embroidery machine, ironing boards, and supplies like yarn, fabric, buttons, and more.

We then took the freight elevator in small groups to the Bit Factory, a meeting and event space on the fifth floor, for lunch and a presentation. Bob Woloszynek, Chief Engineer, Global Material Development at Goodyear, spoke on the topic of "Goodyear's Soybean Oil Technology." Goodyear aims to replace all tire materials with sustainable materials by 2040. Woloszynek's talk described the soybean oil research and testing that is a major part of that effort.

A short walk across the street from Bounce, attendees took turns visiting the **B. F. Goodrich Museum** in Building 24 at Canal Place. Denise Lundell, the museum's curator, was our guide. Artifacts on display include drawings,

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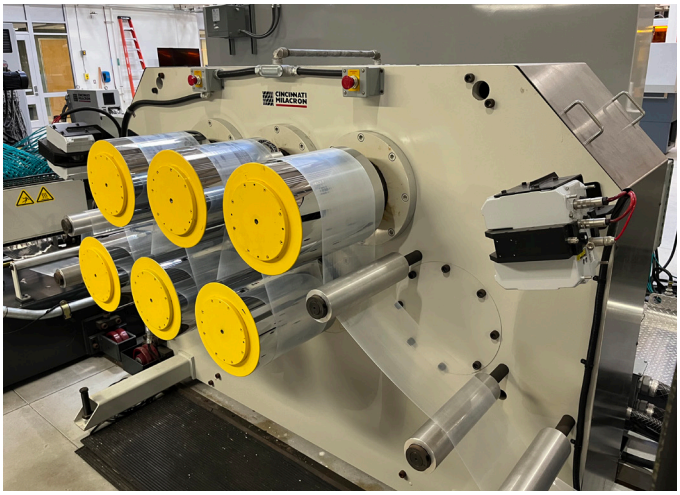

Justin Roebuck

Cooling rolls of a Cincinnati Milacron film extrusion machine at the NPIC.

Tony Meadow

SIA members gather to tour Bounce Innovation Hub.

John Reap

Van Dorn-Demag Extra 28-series, 28-ton clamping-force injection molding machine at the NPIC. The stainless steel material hopper is on the right.

Steve Watson

A group of SIA members takes the freight elevator at Bounce Innovation Hub.

Save the Date: SIA's 52nd Annual Conference *Minneapolis, Minn., May 16–19, 2024*

The Society for Industrial Archeology's 2024 conference will be held in Minneapolis the weekend of May 16–19. The Mississippi River's St. Anthony Falls provided the reason for Minneapolis's rise as a water-powered grain-milling center in the mid-19th c. The falls made Saint Paul, the Twin City to the east, the head of navigation on the Mississippi River. Together the Twin Cities of Minneapolis and Saint Paul attracted railroads and grew into the economic metropole for expansion onto the north Great Plains and into the northern Rocky Mountains. Milling is no longer the heart of the Minneapolis economy, but railroads still are, and the economy of Minneapolis has diversified into other areas, which will be themes explored by the SIA tours on Thursday and Friday.

One of the tours will focus on the engineering infrastructure along the Mississippi River near St. Anthony Falls. Another tour will examine northeast Minneapolis. Historically Northeast, as it is called, housed a diverse array of industrial operations and an equally diverse group of ethnic neighborhoods. More recently, Northeast has been discovered by the artsy crowd and is widely considered the hippest area in the Twin Cities. The Northeast tour will visit both old and new industrial operations as well as facilities at the heart of the cultural transition.

Over the past several decades, Minneapolis had developed into one of the U.S.'s centers for the medical-device industry, the theme of one of the planned tours. In the age of the climate crisis, sustainability has become an important objective for many engineering and industrial concerns. One of the tours will focus on the theme of sustainability. Finally, there are still many "conventional" industrial operations in the Minneapolis area, which one of the tours will explore.

Mill City Museum. Interpreting the history of the flour-milling industry in Minneapolis, the museum was developed by the Minnesota Historical Society adjacent to the ruins of the Washburn A Mill, which was destroyed by fire in 1991 (SIAN Vol. 20, No. 2, Spring 1991). The Guthrie Theater, built in 2006 and designed by Jean Nouvel, is on the left. Its giant cantilevered "endless bridge" offers a stunning view of the Mississippi River.

Fred Quivik all photos

Northrup King Building. This giant warehouse, once owned by the Northrup King seed co., now houses more than 300 artists' studios and is at the heart of Northeast Minneapolis's renaissance as a cultural center. The building, which will be included on one of the SIA tours, features the reinforced-concrete structural system of C.A.P. Turner.

St. Anthony Falls Dam. The dam covers the actual falls and prevents it from receding further upstream. The lock is off to the left. No longer operated by the U.S. Army Corps of Engineers, the lock-and-dam complex is now interpreted by the National Park Service. The open-spandrel concrete-arch 3rd Ave. South Bridge, designed by Frederick Cappelen and completed in 1918, is in the background.

The conference hotel for the 2024 SIA conference is the Royal Sonesta in downtown Minneapolis. The hotel is about two blocks from both the Blue and Green light-rail routes. The Blue Line serves downtown Minneapolis from the Minneapolis-Saint Paul International Airport, and the Green Line connects to Amtrak's Union Station in downtown Saint Paul.

The Royal Sonesta is in walking distance to several important Minneapolis cultural attractions, including the Guthrie Theatre, Walker Art Center, and the Mill City Museum. The hotel is also connected to the Minneapolis Skyway System, a pioneering infrastructure that created a vibrant pedestrian commercial district at the second-floor level throughout Downtown Minneapolis. Covid-19 has greatly reduced the number of people who work downtown, thus creating financial stress for that once-vibrant second-floor commercial zone. Nevertheless, the Skyway System is still walkable, and conference participants will be able to see how physical infrastructure developed to accommodate the concept. The weekend that the SIA is in town, Minneapolis will also be conducting Doors Open Minneapolis, when about one hundred venues not normally open to the public will be open for viewing. SIA members in Minneapolis for the conference may also participate in Doors Open Minneapolis on Saturday or Sunday.

Stone Arch Bridge. Built in 1883 for James J. Hill's Great Northern Ry., the bridge crosses the Mississippi River at St. Anthony Falls. In the background left is the stone Pillsbury A Mill, built in 1881. To the right are other structures of the Pillsbury milling complex. Both the Stone Arch Bridge and the Pillsbury A Mill are National Historic Landmarks.

The Market at Malcolm Yards, located within the walls of the 1871 Harris Machinery Building and next to one of many concrete grain elevators in Minneapolis, is a likely location for the conference banquet.

Student Travel Scholarships. The SIA awards travel scholarships to full-time students and professionals with fewer than three years of full-time experience. The scholarship stipends are intended to help students offset expenses associated with attending SIA events (e.g., airfare, hotel, registration, etc.). To be eligible for a scholarship, the applicant must become a member in good standing. Student memberships are available for as little as $20/year. Applications should consist of 1) a letter demonstrating a commitment to IA from the student, and 2) a letter of reference from a faculty member or an individual active in the SIA. For information or to apply for the 2024 Annual Conference in Minneapolis, Minn., May 16–19, 2024, please contact Scott See, Scholarship Committee chair: *sfsee@mtu.edu*. Deadline for applications is Mar. 31, 2024.

IA EXHIBITS

Urban Archaeology: Lost Buildings of St. Louis, on exhibit Oct. 5, 2023 through Feb. 4, 2024 at the Pulitzer Arts Foundation Museum (St. Louis, Mo.), draws from the rich collection of the National Building Arts Center (NBAC, Sauget, Ill.), bringing together salvaged architectural elements from landmark buildings, residential homes, and neighborhood institutions built in St. Louis between 1840 and 1950. The artifacts on display represent important histories of material innovation, labor, and the everyday lives of the people who inhabit the city. The exhibition sheds light on the city's history, revealing complicated legacies of power, wealth, and neglect that shape our experience of the built environment and daily life. By studying St. Louis's architectural past, Urban Archaeology encourages us to imagine new ways of building, keeping, knowing, and inhabiting places. Info: *pulitzerarts.org/art/urban-archaeology-lost-buildings-of-st-louis/*. ■

Call For Papers

SIA 52nd Annual Conference
Minneapolis, Minnesota

The Society for Industrial Archeology invites proposals for presentations and poster displays at the 52nd Annual Conference in Minneapolis, May 16–19, 2024. The presentation sessions will be held at the conference hotel, the Royal Sonesta in Downtown Minneapolis, on Sat., May 18, 2024.

We invite presentations on all topics related to industrial archeology, industrial heritage, history of technology, social change related to industry, and historic industrial structures and bridges. Papers about regional industries and transportation in Minnesota and the Upper Midwest are particularly encouraged. We also encourage presentations on challenges facing industrial heritage, and on the contributions made to our field by industrial museums. Poster displays are also encouraged and may present works in progress or finished projects. All presentations and poster displays should offer both interpretation and synthesis of data.

The deadline for proposals is Jan. 31, 2024.
https://www.sia-web.org/sia-2024-conference-twin-cities-minnesota/

Presentation Formats: Proposals may be for individual presentations 20 min. in length, a group of three or four presentations on a common theme filling a 90-min. session, a 90-min. panel discussion with 2–5 discussants (a formal moderator is encouraged though optional), or a poster presentation. SIA will provide laptop computers, data projectors, screens, microphones with speakers as needed in each presentation room. Posters will be on display all day Saturday with a dedicated time in the afternoon for poster presenters to be present for discussion.

Proposal Formats: Proposals should be submitted online *(click for online form)* unless special arrangements have been made. Each proposal must include:

1. The presentation title (you will indicate the type of presentation—single paper, session proposal, or poster—on the submission form)
2. A 300-word abstract that outlines the scope, findings, and conclusions of the presentation
3. Contact information, including name, affiliation (if appropriate), email address, mailing address, and telephone number for each presenter
4. A brief biographical statement of 150 words for each presenter
5. The software (incl. version) used to create your presentation and any additional audio-visual requests beyond the standard equipment listed above

For 90-min. themed sessions or panel discussions, the organizer should submit a session title and a brief description of the theme, along with all above information, together as a group, as prompted on the online submission form. If any of these items is missing, the proposal cannot be considered. Note that the above word counts apply separately to each presenter in a group. All speakers are expected to pay the registration fee (for either the full conference or one-day rate).

For questions please contact Martin Johnston, University of St. Thomas, SIA Presentations Committee Chair, *mejohnston@stthomas.edu*.

Eric DeLony Industrial Heritage Preservation Grant Fund
Application Deadline: Mar. 1, 2024

The SIA offers grants from the Eric DeLony Industrial Heritage Preservation Grant Fund from $1,000 to $3,000 for the study, documentation, recordation, or preservation of significant historic industrial sites, structures, and objects. Funds may be used for a range of projects including, but not limited to: increasing public awareness of preservation efforts, photography, videography, preparing inventories, and developing measured drawings of extant significant industrial sites, structures, maritime facilities, and industrial artifacts. Grant recipients must agree to prepare a written summary of their project suitable for publication in either the *SIAN* or for *IA*, the Society's scholarly journal.

Grants are open to qualified individuals, independent scholars, nonprofit organizations, and academic institutions. Organizations are preferred over individuals. Substantial participation from state, county, or local history organizations is encouraged, although such groups do not necessarily need to be a sponsoring agency.

For info on how to apply: *www.sia-web.org/activities/preservation-grants*

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 52, No. 4 Fall 2023

COMPILED BY
Mary Habstritt, New York, N.Y.; Patrick Harshbarger, Wilmington, Del.;
Daniel Schneider, Lake Linden, Mich.; and Marni Blake Walter, SIAN *editor, Westmoreland, N.H.*

GENERAL INTEREST

◆ Deb Chachra. **How Infrastructure Works: Inside the Systems that Shape Our World**. Riverhead Books, 2023. 320 pp., $29 hardcover. Infrastructure is a marvel, meeting our basic needs and enabling lives of astounding ease and productivity, and it consists of the most complex and vast technological systems ever created by humans. When these mostly hidden systems—reservoirs, transformers, sewers, cables, and pipes that deliver water, energy, and information—work well, they hide in plain sight. The author reveals how these essential utilities work, what it takes to keep them running, and just how much we rely on them—but also whom they work well for, and who pays the costs. Across the U.S. and elsewhere, these systems are suffering from systemic neglect and the effects of climate change, becoming unavoidably visible when they break down. Communities that are already marginalized often bear the brunt of these failures. Chachra maps out a path for transforming and rebuilding our shared infrastructure to be not just functional but also equitable, resilient, and sustainable.

◆ **TICCIH Bulletin 100** (2nd Quarter, 2023) includes Miles Oglethorpe, *In Praise of Being Awkward*; Iain Stuart [SIA], *Time to Update the Nizhny Tagil Charter*; Joeri Januarius and Bart Vanacker, *A Database to Safeguard Industrial Heritage*; Mark Watson [SIA], *The Eye of Providence: Belgian Steel in Glasgow*; Shane Gould, *Historic England's Industrial Heritage Strategy*; Jeppe Lorenzen, Randi Sørensen-Johansen, and Ditte Melitha Kristensen, *Nordafar, Testimony to Industrialisation*; Bode Morin [SIA], *We Are Anthracite*; Jaime Migone Rettig, *Chuquicamata Copper Mine*; Martin Dubiny and Vladimír Hain, *History Through Industrial Objects*; Günter Dinhobl and Richard Dieckmann, *The Neunkirchen Screw Factory*; Celina Peña, *Industrial Culture and Heritage in Zacatlan and Necaxa*; Mostafa Ali, *Egyptian Railways Heritage*; Daria Jagiello, *Żnin Sugar Factory Re-Purposed*; Miguel Ángel Campos, Pedro Romero, and Lucía Sánchez, *San Lorenzo Refinery Disappearing*; Nataša G. Jerina, *Innovative Architecture of Gas Stations*; industrial museum report: Z. P. Liollio, *Working a Wreck: The Nevada Northern Railway's Industrial Works Steam Crane*; conference reports: Camilo Contreras, *The X Latin American Colloquium for the Conservation of Industrial Heritage*; Hercules Fassourakis and Francesco Antoniol, *Gas—Working Together. Athens*; and Francesco Antoniol, *TICCIH's Working Group on Business Archives*; and a book review: *Palavras em Ruínas*, by Guilherme Pozzer.

IRON & STEEL

◆ Oana Cristina Tiganea. **The Rise and Fall of Romanian "Steel Fortresses" and the Case of Hunedoara, 1949–1999. Built and Environmental Legacies of Socialist Industrialisation**. Maggioli Editore, 2023. 307 pp., illus. In the newly formed Eastern Bloc, the "Need for Steel" became a tool in strengthening the political and ideological foundation of the socialist system, in which the centralized Soviet model of territorial governance played a major role in building new "steel identities." One such industrial place is Hunedoara in Romania. It became the first "Steel Fortress" during 1949–1959 and arrived at its industrial and territorial peak during the mid-1970s. The book follows through the case of Hunedoara, the experimentation, development, and implementation of a completely new planning model of the industrial architecture, sites, mono-industrial towns, and territories in socialist Romania. The book brings new insights on how the industrial architecture was approached during communism in Romania, and during the post-1989 deindustrialization.

◆ Avi Wolfman-Arent. **How a Philadelphia Firm Used Steel to Transform the World of Transit**. *Billy Penn*

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Publications of Interest (continued from page 7)

Newsletter (Oct. 11, 2023). *https://billypenn.com*. Article on the Budd Co., which built groundbreaking trains, planes, and automobiles in the early 20th c. Edward Gowen Budd founded the Edward G. Budd Mfg. Co. in 1912. Soon after, he developed the first all-steel automobile body —a genuine breakthrough. In 1932, Budd introduced the first stainless-steel airplane, and later, the more successful streamlined, stainless-steel "Zephyr" trains and the Rail Diesel Car (RDC) passenger trains. In 2021, a real estate investment firm announced it would turn the site of the old Budd plant into a life sciences hub called "Budd Bioworks," a center for emerging fields like gene and cell therapy.

Mines & Mining

- Pete Kero. **Minescapes: Reclaiming Minnesota's Mined Lands.** Minnesota Historical Society, 2023. 238 pp. $24.95. Describes changing perspectives on iron lands of the Mesabi Range and the processes, both natural and human-made, to reclaim those lands. Particular attention is given to the Laurentian Vision Project which brought together landscape architects, engineers, and residents to dream up possibilities for the landscape and then to make those dreams a reality by creating wildlife sanctuaries and opening former minelands for recreation. Excerpt: *Minnesota History* (Summer 2023), pp. 226–236.

- Jens Malling. **Underground Art: Germany's Buried Trove of Cold War Paintings—In Pictures**. *The Guardian* (Sept. 21, 2023). *https://www.theguardian.com*. Inside the former Wismut mining co. in Germany are thousands of artworks, painted while the company secretly mined uranium for Soviet atomic bombs. This online gallery displays a selection of the works, featuring miners, mining landscapes, and infrastructure.

- Michael F. Weber. **Always More Production—The History of Mining Iron at Cornwall, Pennsylvania, from 1737 until 1973**. Cornwall Iron Furnace Associates, 2023. 262 pp., 150+ illustrations, $40. Published in time for the 50th commemoration of the end of iron mining at Cornwall in June 1973, which included a public celebration in Cornwall on June 17, 2023. Tells the fascinating story of the mining of iron ore at Cornwall, which continued for 236 years. The mines at Cornwall were some of the longest continuously operated mines in the U.S. and the largest iron mined until the 1880s. By the time mining ended in 1973, miners produced about 106 million tons of iron ore, along with large quantities of copper, silver, gold, and cobalt. The book is available at the Cornwall Iron Furnace: *http://www.cornwallironfurnace.org* or 717-272-9711.

Water Transport

- Bill Bleyer. **'Awful Conflagration.'** *New York Archives Magazine* (Fall 2023), pp. 16–21. Long Island Sound's worst maritime disaster was the fire on the steamboat *Lexington* in 1840. This little-remembered event left but four survivors out of some 150 people on board.

- Adela Suliman. **'Remarkable Discovery' as Intact 1881 Shipwreck Found in Wisconsin Waters**. *WashPost* (Sept. 2, 2023). *https://www.washingtonpost.com*. The *Trinidad*, a schooner-type vessel that sank in 1881 in Lake Michigan, was located 270-ft. deep near the Algoma coast by members of the Wisconsin Underwater Archaeology Assoc. It was built in 1867 at Grand Island, N.Y., by shipbuilder William Keefe at a shipyard established specifically for its construction. As a "canal schooner," it was built to pass through the Welland Canal that connects Lake Erie and Lake Ontario. Includes photos and history of the vessel.

- Amy Borgens. **Marked for Disaster: The Tragic Loss and Inspiring Legacy of the 1554 Spanish Plate Fleet of Padre Island, Texas.** *Sea History*, No. 181 (Winter 2022–23), pp. 14–20. Avail. *www.seahistory.org*. A look back at what is believed to be the first scientific excavation of a shipwreck in the U.S. in 1972 and the multiple precedents it set for the then-emerging field of underwater archeology.

Bridges

- Ronald G. Knapp [SIA] and Terry E. Miller. **Theodore Burr and the Bridging of Early America: The Man, Fellow Bridge Builders, and Their Forgotten Timber Spans**. Ron & Terry, 2023. Sponsored by the National Society for the Preservation of Covered Bridges. 526 pp., illus. $60 hardcover; $58 paperback. Theodore Burr (1771–1822) was the most prominent of America's early 19th-c. timber bridge-building pioneers. In less than 30 years, he erected timber bridges over several major rivers—the Hudson, Schoharie, Mohawk, Delaware, Potomac, and Susquehanna rivers. Burr claimed to have built 45 bridges, including some of the most challenging and superlative bridges in American history. More than 1,100 timber bridges used variant forms of Burr's 1817 patented "Burr arch-truss" design—a multiple kingpost truss with an added segmented timber arch. Of these, more than a hundred still stand. In addition to being the first full study of Burr's work, this book narrates the significant role of covered timber bridges and associated turnpikes in the westward expansion of the new nation and refocuses scholarship on advances in transportation infrastructure during one of the most important periods in American history. Based on archival research and illustrated with

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CALL FOR NOMINATIONS
2024 SIA General Tools Award

The SIA General Tools Award Committee is seeking nominations for the 2024 General Tools Award. Give this committee some work to do, reviewing nominations for distinguished service to industrial archeology. Any SIA member in good standing may make a nomination.

Remember, the General Tools Award is the highest honor the SIA can bestow. It recognizes individuals who have given sustained, distinguished service to the field of industrial archeology. The award is presented at the SIA's annual business meeting.

Here's what we're looking for: (1) the recipient must have given noteworthy, beyond-the-call-of-duty service, over an extended period, to the cause of industrial archeology; (2) the type of service for which the recipient is recognized is unspecified, but must be for other than academic publication; (3) it is desirable but not required that the recipient be, or previously have been, a member of the SIA; (4) the award may be made only to living individuals. Teams, groups, agencies, firms, or any other collective entities are not eligible.

Think of a name, then start a nomination. The committee can help you finish. You can write a statement of 2–3 pages identifying the qualifying accomplishments. Or, write a partial nomination describing one sector of the person's work you know best, with suggestions of others who might know more about the candidate's career. Nominations also may be collaborative efforts submitted by two or three members.

Supplementary material (the candidate's resume, for example) may be added. Nominations must also include the name, address, phone, and email of the nominator.

Information on the award and examples of successful nominations appear on the SIA website for many of the members who have received the award to date: *www.siaweb.org/activities/awards/general-tools-award*.

Previous recipients are Emory Kemp (1993), Robert Vogel (1994), Edward Rutsch (1995), Patrick Malone (1996), Margot Gayle (1997), Helena Wright (1998), Vance Packard (1999), Eric DeLony (2000), Robert Merriam (2001), Charles Parrott (2002), Alex Barbour (2003), Charles K. Hyde (2004), Lance Metz (2005), [no award given in 2006], Patrick Martin (2007), Chris Andreae (2008), Carol Poh (2009), Robert Gordon (2010), Richard Anderson (2011), Jane Mork Gibson (2012), Bob Frame (2013), Jet Lowe (2014), [no award given in 2015], Duncan Hay (2016), Patrick Harshbarger (2017), Fred Quivik (2018), David Simmons (2019), Brian Shovers (2020), Vern Mesler (2021), and Louise Trottier (2022).

The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], then chairman of the board of General Tools & Instruments Co. LLC. High Road Capital Partners acquired General Tools & Instruments in Feb. 2014 and have been pleased for the SIA to continue using the company's name on the award. The award is funded by the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of a citation, a commissioned sculpture ("The Plumb Bob"), and a cash award.

Please email or call SIA Headquarters (*sia@siahq.org*, 906-487-1889) if you are interested in making a nomination for 2024. Nominations are due on Mar. 31, 2024.

To the Editor:

I'm writing about some facts recently published in *SIAN*, Vol. 52, No. 3 that need clarification and correction.

In "Grand Rapids IA: 2023 Annual Conference Review," the report on the visit to the *Milwaukee Clipper* says that the ship is the "oldest and last passenger ship on the U.S. side of the Great Lakes." Launched in 1904, she is certainly older than the 1953 S.S. *Badger*, a coal-fired car and passenger ferry still operating between Ludington, Mich., and Manitowoc, Wisc. But, the *Badger*'s existence means the *Clipper* is not the last passenger ship on the U.S. side of the Great Lakes.

The S.S. *Badger* is also a National Historic Landmark so the statement that the *Milwaukee Clipper* is the "only floating National Historic Landmark" is incorrect. The *Badger* is a nearby example but there are many other floating NHLs. These include the destroyer escort U.S.S. *Slater* in N.Y., the battleship U.S.S. *Alabama*, and the submarine U.S.S. *Pampanito* in Hawaii, but they are just a few of many historic vessels of that have attained this level of national significance.

I trust our *SIAN* reporter gave the facts as related to the tour group, but I felt the record needed to be rectified.

Sincerely,
Mary Habstritt

IA Books Available from Emory Kemp's Library

A founding member of SIA, Emory Kemp also served as a director, vice president, and president of SIA during the 1970s–80s, and left behind an extensive personal library when he passed away in early 2020. His wife Janet Kemp would like to find good homes for the books, which are available for free—first come, first served.

Contact Janet at *jkarenk73@gmail.com* if interested. IA-related titles include:

- Harold E. Babbitt. **Sewerage and Sewage Treatment**. 6th ed. John Wiley & Sons, 1949.
- George S. Emmerson. **John Scott Russell: A Great Victorian Engineer and Naval Architect**. John Murray, 1977. Hardback.
- Thomas F. Hahn. **The Chesapeake & Ohio Canal: Pathway to the Nation's Capital**. Scarecrow Pr., 1984. Hardback. Signed copy.
- A. Rupert Hall and Norman Smith, eds. **History of Technology. 2nd Annual Vol., 1977**. Mansell Information Pub., 1977. Hardback.
- Thomas F. Hahn and Emory L. Kemp. **Cement Mills Along the Potomac River**. Institute for the History of Technology and Industrial Archaeology Monograph Series Vol. 2, Nov. 1, 1994. Paperback.
- Barb Howe, Dolores Fleming, Emory Kemp, and Ruth Ann Overbeck. **Houses and Homes: Exploring Their History**. AASLH, 1987. Paperback—6 copies.
- Emory L. Kemp, ed. **American Bridge Patents: The First Century, 1790–1890**. WVU Pr., 2005. Paperback.
- Emory L. Kemp. **Essays on the History of Transportation and Technology**. WVU Pr., 2014. Hardback.
- Emory L. Kemp, ed. **Industrial Archaeology: Techniques**. Krieger Pub., 1995. Hardback.
- Emory Kemp and Michael Caplinger. **19th Century Petroleum Technology in North America**. WVU: Institute for the History of Technology and Industrial Archaeology, 2007. Paperback.
- Emory L. Kemp. **The Great Kanawha Navigation Works**. Univ. of Pittsburgh Pr., 2000. 5 hardback, 4 paperback copies.
- Thomas Roscoe. **The London and Birmingham Railway: With the Home and Country Scenes on Each Side of the Line**. Charles Tilt, ca. 1838. Rebound hardback.
- D. B. Steinman. **The Builders of the Bridge: The Story of John Roebling and His Son**. Harcourt, Brace and Co., 1945. Hardback.

There are also many publications on concrete structures and some old math textbooks. Contact Janet Kemp for the complete bibliography: *jkarenk73@gmail.com*.

Iron and Steel Heritage Forum Coming Soon

After many discussions, emails, and meetings since the 2021 annual conference in Bethlehem, Pa., the SIA board has approved plans to start an Iron and Steel Heritage Forum. The establishment of this first special interest group will, we hope, inspire others to start additional special interest groups.

The Iron and Steel Heritage Forum will cover all aspects of iron and steel: the mining of iron ore and metallurgical coal, primary and secondary steel making, foundries, maritime and rail networks supporting the industries, and furnaces (charcoal, Bessemer, open hearth, electric arc), modern processes including direct reduction of iron and green steel making. This special interest group will focus on the heritage of the iron and steel industries in North America.

A key part of establishing the forum is to work with other organizations focused on preserving and documenting iron and steel heritage. We will contact each organization, with a goal to establish a network of these organizations so we can work together to promote the heritage of iron and steel industries.

Planning has started for regular activities including monthly online talks, monthly online calls for iron and steel heritage organizations, an online forum, and more.

The forum is expected to launch in the spring of 2024.

If you'd like to get involved or hear more about the Forum, contact Tony Meadow at 510-334-8161 or *tmeadow@ferrumwest.com*.

Work Rules and Wages at a Delaware River Shipyard, 1969 and 1972

Past terms and conditions of employment for hourly workers can enhance our understanding of historical industries. The author's earlier articles in *SIAN* and *Nautical Research Journal* focused on the physical plant of shipyards and their products, but touched little upon the workers' circumstances. However, a booklet recently added to the author's archive, entitled Work and Safety Guide, provides detailed information regarding work rules at Sun Shipbuilding & Dry Dock Co. of Chester, Pa., and wage rates effective Jan. 4, 1969, and Jan. 4, 1972.

The original plant of Sun Ship was constructed in 1916 on the Delaware River below Philadelphia. The yard had five shipways. Its main purpose was to build tankers for the parent Sun Oil Co. to bring Texas crude to Sunoco's refinery on the Delaware River at Marcus Hook, Pa. The yard was rebuilt after WWI, with eight lengthened shipways and other improvements. A business-smart technological pioneer, Sun began converting merchant ships from coal-fired boilers to oil-fired engines during the 1920s. Sun promoted the proprietary Sun-Doxford marine diesel engine not just for the one-time revenue, but to grow the long-term demand for Sunoco's diesel fuel. Similarly, Sun was an innovator of the all-welded ship during the 1930s, for which Sunoco would supply the necessary gases. Sun also built tankers for other major oil companies.

During WWII, Sun greatly expanded the shipyard and built more than 116,500 deadweight tons of ships per month, in addition to pressure vessels, oil refinery equipment, "special industrial equipment," machinery, and machine parts, while repairing ships damaged by war and accident. The Sun plant was the largest tanker shipyard in the world, with 28 ways. The standard T-2 tanker of the war was designed by Sun, where 198 of them were built.

After the war, shipbuilding withdrew to the original yard. Sun built the "Deep Ocean Mining" ship *Hughes Glomar Explorer* (Hull No. 661, delivered Feb. 23, 1973), supposedly to collect manganese nodules from the sea floor. Its actual purpose was to raise the wreck and contents of a Soviet ballistic missile submarine in 1974. The mission was largely unsuccessful, due to partial failure of the grasping claw.

In the booklet of 1969, the chapter entitled "Safety Guide" consists of Sections 1 through 20. Much of the guidance pertains to avoiding injuries and using tools and materials properly. Safety glasses, a helmet, and the first pair of ear plugs (and only the first pair) were provided at no cost to the employee. Safety shoes, gloves, aprons, and other du-

(continued on page 12)

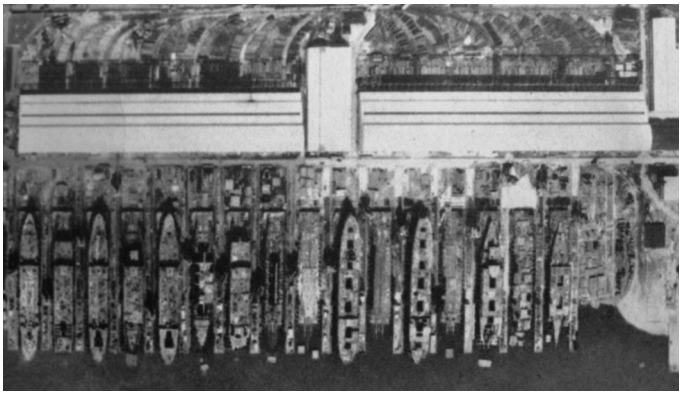


Photo by Sun Ship, published 1946.

The North Yard and No. 4 Yard during WWII. The shed consists of a center section and two wings.

The Central Yard, now the site of Harrah's Philadelphia Casino & Racetrack, ca. 1990. A depressed floating dry dock is present in the wet basin at the bottom left. A floating crane (on the square object at the head of the smallest basin) is revealed by its long shadow. The three circular features are dolphins.

The North Yard and No. 4 Yard, ca. 1990. Remnants of No. 4 Yard shipways are awash. The north wing of the shed had already been demolished. The center section was demolished in 2022 for construction of the Delco Logistics Center.

rable personal items could be purchased through a payroll-deduction plan.

Sun allowed workers 20 minutes for lunch without loss of pay. A worker who lost an ID badge was charged 50¢ for a new one, and was not paid for the time spent getting the new badge. One paid day was granted for the funeral of a family member, but only if the employee was scheduled to work that day, and proof of death was required. Effective June 1971, four weeks of vacation was granted for 20 years of service. Previously, four weeks of vacation required 25 years of service. If eligible, workers also received ten paid holidays.

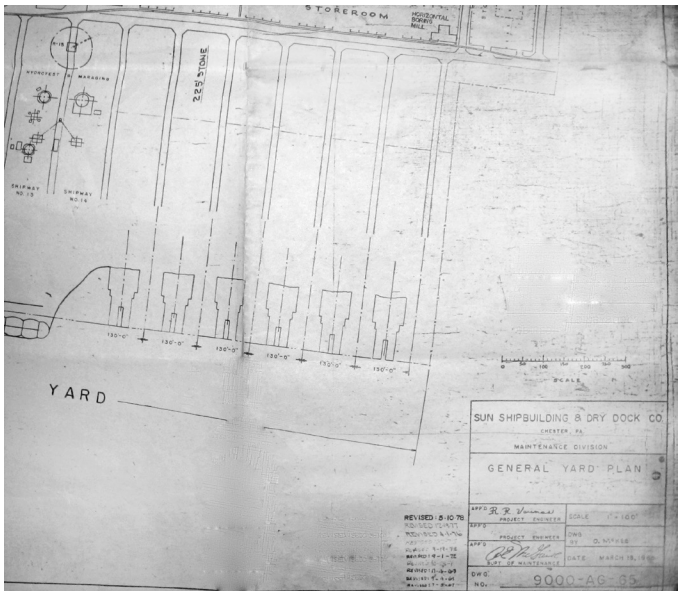
Section 2 of the booklet ("Personal Protective Equipment") includes subsections for eye, head, ear, hand, and foot protection. The first article in British medical literature that positively attributed lung disease to asbestos was published in 1924, and similar articles began to appear in the U.S. by 1931, but the Work and Safety Guide contains no section on respiratory protection. The general discussion in Subsection 2.1 states that respiratory equipment was "issued free to all employees."

Appendix A ("Reasons for Pink Slips or Discharge") details work rules and penalties at Sun. The pink slip was a written warning issued by Sun to employees whose work was unsatisfactory or who had broken company rules and regulations. It was presented in writing so that workers understood clearly the nature of the offense and to insure that they had been made aware of the fact. The first pink slip stood as a warning for four months, after which it was rescinded if work had been satisfactory and an additional pink slip had not been issued. If a second pink slip was issued during the life of the first, the first pink slip was not rescinded at the end of four months, and both slips stood for a period of eight months from the date of issue of the second slip. If no additional pink slips were issued during the eight-month period, both slips were rescinded at the end of the eighth month. The issuance of a third pink slip at any time during the life of the second resulted in discharge.

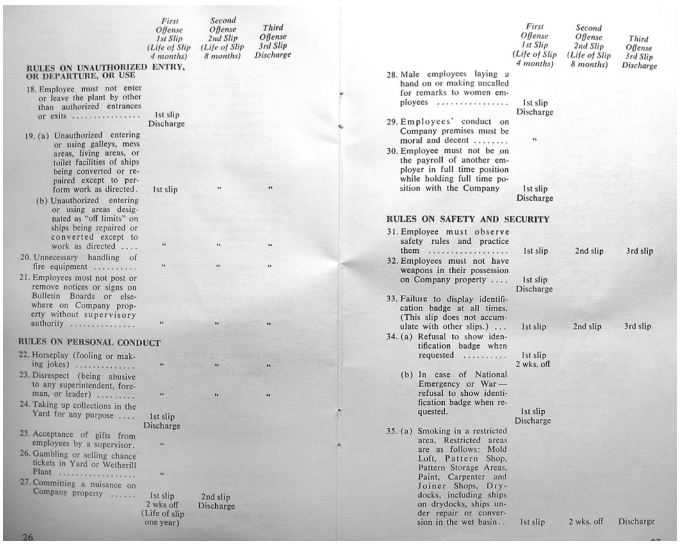
Workers got off fairly easy for passive offenses like "Loafing" (Rule 6) and "Sleeping during working hours" (Rule 7). Not so alcohol. "Rules on Drinking" included 30 days off and a slip that stood for one year for an employee who had been drinking and deemed "unfit for work," per Rule 9.(a). A first-slip discharge was issued for "An employee found carrying intoxicating beverages on the property of the Company" under Rule 9.(b). Many other rules also decreed first-slip discharge, including all six "Rules on Dishonesty" and six of the nine "Rules on Personal Conduct." Dishonesty was something as simple as ringing another person's timecard. A one-and-out rule also stood for Rule 15.(a), "Attacking a supervisory employee or guard" under "Rules on Physical Violence and Destruction." The only capital offense was Rule 15.(c), "Fighting another employee other than supervisor or guard." It ruled one month off and a slip that stood for a year. A second slip for fighting required discharge and was the only offense with the notation "Never rehired."

Appendix B is the "Schedule of Hourly Wage Rates," effective Jan. 4, 1972. This schedule was glued over the original page that shows the schedule effective Jan. 4, 1969. The highest paid hourly worker was the loftsman first class in Monopol, Dept. 48 (a unit of the Hull Div.), who was paid $5.01 per hour in 1972, an increase from $4.26 in 1969. That's a 17.6% raise, when the minimum wage was $1.60 per hour and the annual rate of inflation was reportedly as high as 3.4%. Online calculators reckon that the loftsman first class of 1972 was paid $36.80 per hour in dollars of Oct. 2023. The least paid worker was the laborer, but he was still paid $3.32 per hour in 1972, and enjoyed an unspecified increase when power brushing, painting, or sand blasting. So everyone was paid

(continued on page 19)



Title block and portion of General Yard Plan dated Mar. 18, 1965, revised through May 10, 1978, depicting the shoreline and shipways of the No. 4 Yard as per the aerial photo of ca. 1990.



	First Offense 1st Slip (Life of Slip 4 months)	Second Offense 2nd Slip (Life of Slip 8 months)	Third Offense 3rd Slip Discharge
RULES ON UNAUTHORIZED ENTRY, OR DEPARTURE, OR USE			
18. Employee must not enter or leave the plant by other than authorized entrances or exits	1st slip Discharge		
19. (a) Unauthorized entering or using galleys, mess areas, living areas, or toilet facilities of ships being converted or repaired except to perform work as directed.	1st slip	"	"
(b) Unauthorized entering or using areas designated as "off limits" on ships being repaired or converted except to work as directed	"	"	"
20. Unnecessary handling of fire equipment	"	"	"
21. Employees must not post or remove notices or signs on Bulletin Boards or elsewhere on Company property without supervisory authority	"	"	"
RULES ON PERSONAL CONDUCT			
22. Horseplay (fooling or making jokes)	"	"	"
23. Disrespect (being abusive to any superintendent, foreman, or leader)	"	"	"
24. Taking up collections in the Yard for any purpose	1st slip Discharge		
25. Acceptance of gifts from employees by a supervisor.	"		
26. Gambling or selling chance tickets in Yard or Wetherill Plant	"		
27. Committing a nuisance on Company property	1st slip 2 wks. off (Life of slip one year)	2nd slip Discharge	
28. Male employees laying a hand on or making uncalled for remarks to women employees	1st slip Discharge		
29. Employees' conduct on Company premises must be moral and decent	"		
30. Employee must not be on the payroll of another employer in full time position while holding full time position with the Company	1st slip Discharge		
RULES ON SAFETY AND SECURITY			
31. Employee must observe safety rules and practice them	1st slip	2nd slip	3rd slip
32. Employees must not have weapons in their possession on Company property	1st slip Discharge		
33. Failure to display identification badge at all times. (This slip does not accumulate with other slips.)	1st slip	2nd slip	3rd slip
34. (a) Refusal to show identification badge when requested	1st slip 2 wks. off		
(b) In case of National Emergency or War—refusal to show identification badge when requested.	1st slip Discharge		
35. (a) Smoking in a restricted area. Restricted areas are as follows: Mold Loft, Pattern Shop, Pattern Storage Areas, Paint, Carpenter and Joiner Shops, Drydocks, including ships on drydocks, ships under repair or conversion in the wet basin..	1st slip	2 wks. off	Discharge

Pages 26 and 27 of the Work and Safety Guide of 1969.

CALL FOR NOMINATIONS 2024

President, Vice-President, Two Directors, One Nominations Committee member, and the TICCIH Representative.

Attention SIA Members!

This is your opportunity to help maintain the quality, strength, and diversity of leadership that has kept the SIA growing for more than five decades. We have six important positions to fill in the coming year and you can help choose the next leaders of your organization.

SIA's elected officials work for you to carry out the business of the organization. They represent the SIA to others, recruit new members, and plan the future of your Society.

In 2024, there will be six (6) openings: President, Vice President, two members of the Board of Directors, one member of the Nominations Committee, and the TICCIH Representative. We need candidates willing to give their time, knowledge, and experience to the SIA.

This year's Nominations Committee is asking you to identify candidates—friends, colleagues, or perhaps even yourself—who are qualified and willing to serve. (If modesty precludes self-nomination, please find someone to nominate you.) Each candidate must be an SIA member in good standing and must consent to being considered for nomination.

The deadline for nominations is Mon., Jan. 15, 2024. If you have any questions or need additional information, please don't hesitate to contact Rebecca Burrow, Chair, SIA Nominations Committee, 25624 S Ridge Rd, Beavercreek OR 97004; 626-818-3083, *rgburrow@gmail.com*.

Positions Open in 2024:

President (2-year term). The President is the principal executive officer of the SIA and, subject to the control of the Board, in general supervises and controls the business and affairs of the SIA and sees that all orders and resolutions of the Board are carried into effect. The President is a member of the Board and presides at all meetings. To be eligible for this position the candidate must have served on the Board for a minimum of one (1) year as a voting member.

Vice President (2-year term). The Vice President is a member of the Board and in the absence or disability of the President performs the duties and exercises the authority of the President; and in general performs all duties as from time to time may be assigned by the President or the Board. To be eligible for this position the candidate must have served on the Board for a minimum of one (1) year as a voting member.

Directors (3-year term). Two (2) of seven director positions are open this coming year. The Board meets approximately four times per year (both in person and online), including during the Annual Conference. Directors govern official business and affairs of the SIA, and often chair committees that oversee operations such as publications, grants, and local chapters.

Nominations Committee Member (3-year term). One (1) of three elected members who assist with recruiting and evaluating nominees and monitoring annual elections, with the assistance of the immediate past president as an *ex-officio* member. It is expected that members will attend the Annual Conference to count ballots, and that each member will chair the committee during the final year of their term. The Chair announces the results of the election at the Annual Business Meeting during the Conference.

TICCIH Representative (3-year term). American SIA representative to the International Committee for the Conservation of the Industrial Heritage (TICCIH). Candidate would be tasked with increasing U.S. and SIA involvement with TICCIH. The candidate would have to fund their own travel expenses or be backed by an institution/company to cover the estimated $2,000.00 a year for the annual meeting.

All nominations will be reviewed by the Nominations Committee, which will present a slate of candidates to the membership. Each nomination must include the name, address, telephone number, and email address of the person being nominated, the office for which the nomination is being made, and evidence that the candidate consents to being nominated. Once the slate is selected, the Nominations Committee will request a brief biographical statement and a photograph from each nominee.

For summaries of the nomination process and responsibilities of SIA officials, view the SIA Bylaws at *https://www.siaweb.org/about/bylaws/*. If you're unsure about the process or the obligation, please call or write the Nominations Chair at the address above. Current officeholders and their terms are shown below for your reference.

SIA Officers

T. Arron Kotlensky, President (2022–2024)
Fred Quivik, Vice President (2022–2024)
Saul Tannenbaum, Past President (2022–2024)
James Bouchard, Secretary (2022–2025)
Nanci K. Batchelor, Treasurer (2022–2025)

Board of Directors

Erik Nordberg (2021–2024)
Scott See (2021–2024)
Martha Mayer (2022–2025)
Tim Tumberg (2022–2025)
John Mayer (2023–2026)
Mary Starbuck (2023–2026)
Christopher Fennell (2023–2026)

Nominations Committee

Rebecca Burrow (2021–2024)
Ron Petrie (2022–2025)
William McNiece (2023–2026)
Saul Tannenbaum, *ex officio* (2022–2024)

TICCIH Representative

Paul White (2021–2024)

AKRON (continued from page 3)

anniversary commemorative gifts to workers, rubber tire ash trays, clothing, and more inside renovated tire display cases.

The post-lunch activities continued with a "STEM experience" at Goodyear Tire and Rubber headquarters for a preassigned group of 20 participants, led by Jason Chapman, from Goodyear Community Engagement. The rest of us returned to the Univ. of Akron for an interactive presentation by John Fellenstein, aka Professor Polymer. Demonstrating polymer science in real-life uses, he had the group sticking pins through balloons (a rare few managed to not pop their balloon), creating slime, and sculpting heated, malleable polymer.

We next enjoyed a quick late-afternoon stop at **Stan Hywet Hall and Gardens**. This National Historic Landmark (built 1912–1915) is significant as the home of F. A. Seiberling, co-founder of the Goodyear Tire and Rubber Co. The name Stan Hywet is Old English for "stone quarry" or "stone hewn," an acknowledgement that the mansion is built on the site of an old quarry. During the self-guided visit, many SIA members added more IA interest by chatting with the docents about details of the property's plumbing and mechanical systems.

After a buffet dinner at the hotel, the group trekked five minutes across the parking lots to the **Goodyear Branch of Akron Summit County Public Library**. Here we enjoyed two informative and entertaining presentations. The first was on the history of the Goodyear Heights neighborhood by local historians and residents Mike Herhold and Sharon Conner. The second was a Goodyear Blimps Retrospective by former Goodyear Airship Operations Director Scott Baughman.

For Friday's events, we headed north on Highway 8 toward Cleveland with Ron Petrie as our guide and narrator. The first stop of the day was **Lincoln Electric**, a world leader in arc welding, robotic welding systems, and plasma and oxy-fuel cutting. The visit started in the auditorium for a presen-

(continued on page 16)

Aron Eisenpress

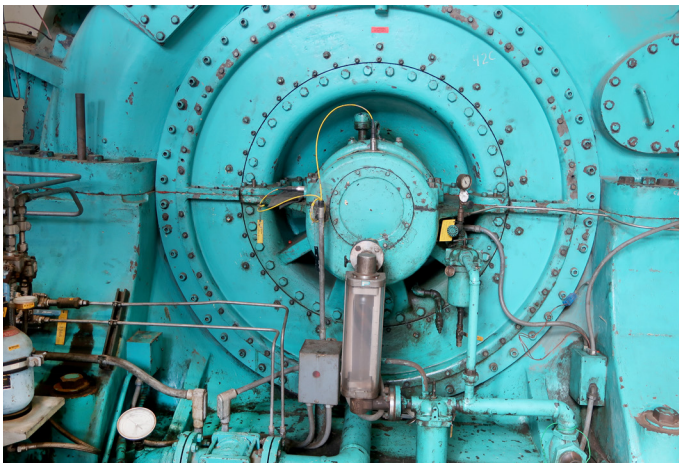
Pool ("The Plunge") at Stan Hywet Hall. It is 46 ft. long, 16 ft. wide, 8 ft. deep, and 3'2" at the first overflow, 4'8" at the second overflow, and 7'5" at the third overflow.

William McNiece

View from the Building 64 control room.

Steven Walton

Lincoln Electric welcomes the SIA.



Aron Eisenpress

Detail of machinery at NASA Glenn Research Center.

CHAPTER NEWS

Northern New England Chapter will miss the iconic Jones & Lampson Machine Tool Co. building (Springfield, Vt.), site of the chapter's Fall Tour in 2019. It was unoccupied and slated for demolition, due to the flat roof caving in from the weight of snow. As a superfund site, the chemicals (underground, beside the river) had to be mitigated. The pavement will be dug up to eliminate the chemicals, mostly metal-cutting fluids. When the project is all done, the small original end of the building will be preserved for historic purposes. Then a new, modern, much smaller building will be erected with the hopes of drawing new manufacturing business to the once-famous Precision Valley community.—*David Dunning*

Roebling Chapter (Greater N.Y.-N.J.) held its 43rd Annual Symposium on Oct. 28 at Montclair State Univ., Montclair, N.J. Presentations included Bierce Riley and Timothy Renner, *Welcoming Remarks*; Joshua Kavett, *Joseph Goldie, Anvil Maker in NYC, 1838–1850*; Clifford Zink, *From Prussia to Brooklyn: How Roebling's Extraordinary Education Informed his Work in America*; Jodi Shapiro, *A Grand New Connection: Grand Central Madison*; Nina Rappaport, *Old Factories for New Production*; Kevin Olsen, *Railroads, Remediation, & Recreation, the Story of Liberty State Park*; Joe Macasek, *Three Industrial Archeology Adventures in Northern New Jersey*; Matthew S. Tomaso and Carissa Scarpa, *Alternative Models of Industrialized Society and Landscape in the Mid-19th Century: Feltville and the North American Phalanx*; and Eugene Boesch, *The Spicer Manufacturing Co. and its Universal Joint: Creating an Automotive Industry Revolution in South Plainfield, N.J. 1903–1929.*

***Support Your Local Chapter**. For info on a chapter near you or to start one, check out the local chapters section of the SIA website* (www.sia-web.org). ■

David Dunning

The J&L Machine Tool building before and during demolition.

New Journal Editor Sought

The Society for Industrial Archeology seeks a new editor or a team of co-editors for its biannual journal *IA: The Journal of the Society for Industrial Archeology*. The new editor's duties will commence in 2024. Editorial duties include identifying and soliciting individual articles and theme issue editors, facilitating peer review, and working with authors on revisions. The editor(s) will define editorial policy for the journal, oversee and manage the review process, make decisions on acceptance/rejection of articles, and edit revised articles and graphic content, as well as receive book reviews from the book review editor (whom they may be able to appoint). They then will work with an external copy editor and layout professional to produce journal issues. The Society would also encourage the new editor to establish an Editorial Advisory Board.

All editorial activities take place electronically, so the editor(s)' location is not germane, so long as the applicant has access to appropriate technology. Necessary digital skills include email, facility with DOCX and PDF files (the latter necessary for markup of page proofs), and basic image manipulation. The editor(s) will report quarterly to the board and attend their meetings via Zoom, and is strongly encouraged to attend SIA's annual meeting in person.

Interested parties are asked to send a resume and a letter of application to *ia-editor@siahq.org* by **May 1** for decision at the SIA Board meeting during the SIA Minneapolis Conference mid-May. For questions, please email our current *IA* editor, Steven Walton, at *sawalton@mtu.edu*.

tation on the company and its history. John Lincoln founded the company in 1895 to manufacture electric motors. His brother James, 17 years younger, joined him in the firm and together by 1911 they had invented a variable voltage arc welder, catapulting the firm into a leadership role in a new technology and widely adopted method of metal fabrication. Today, Lincoln Electric's Cleveland plant covers an area greater than 25 football fields and employs 11,000 at this plant. The firm has 70,000 employees worldwide.

Lincoln Electric treated the SIA to detailed behind-the-scenes tours of several processes. We viewed arc welding equipment and learned about frequent innovations in manufacturing. The tour of their machine division consumables included a start-to-finish view of the process of stick electrode manufacture. Lincoln also has a growing business in electric chargers, up to 900 kW. Outside, we viewed their wind turbine that produces 2.5 megawatts or about 10% of the plant's power.

The next stop was at **Scranton Flats** along the Cuyahoga River, a reclaimed brownfield and now a section of the Towpath Trail. Jim Ridge, founder of Share the River, and Byron Sah, Chief Section Engineer for bridge design in Cuyahoga County, met our group and discussed the river and its bridges. The **Eagle Ave. Bridge**, a vertical-lift bridge, built in 1930–31, has been out of service since 2005 and is scheduled to be removed in 2025. The **Hope Memorial Bridge**, formerly known as the Lorain-Carnegie Bridge, built in 1932, is a 3,300-ft.-long, double-deck, truss bridge. It is perhaps best known for its Art Deco-style aesthetic details and the iconic "Guardians of Transportation" statues that grace its portals. These statues inspired the renaming of the Cleveland Indians baseball team the Cleveland Guardians. Just as half of the group reached an observation deck while discussing the bridges, they caught the passing self-unloading barge *Pathfinder*, guided upriver by her articulated push-tug, *Dorothy Ann*.

En route to lunch, we took in the industrial landscape of the Cuyahoga Valley, including the B&O terminal building and the remains of Standard Oil Co. along Rockefeller Rd. A quick lunch stop was made at **CanalWay Center**, a park and visitor center.

Next we arrived at the **NASA Glenn Research Center** where we were greeted by Jared P. Reed, Chief, Systems, Operations, and Maintenance Branch, and retired engineer Raymond Beach. After clearing vehicle inspection, the first stop was the gift shop, then back on the bus for an overview by Bob Arrighi, the Center's historian and archivist. The National Advisory Committee for Aeronautics (NACA) established the facility in 1941 to engage in scientific study of all aspects of aviation. During WWII, testing focused on improving piston engines and transitioned after WWII to focus on turbojets. It became part of NASA in 1958.

First we visited the Propulsion Systems Laboratory, Building 64 (central air and equipment building), which contains massive equipment needed to run the supersonic wind tunnel and the zero-gravity facility (which, we learned, has a slight curve to it to accommodate for the earth's rotation). Even before entering the building, we could hear the very loud noise from the machinery inside, which was only running at a fraction of its capacity. As we entered, we met Astro, a Boston Dynamics robot "dog" that does inspections so that humans can avoid frequent exposure to the extreme noise. This building has a 134,500-volt power supply from Cleveland Public Power. Air is compressed, cooled, dried, and expanded to -90 degrees F at 10 psig. We climbed a couple flights of stairs to visit the control room—employing multiple generations of technology—that overlooks all the equipment in the space below.

We also visited the Engine Research Building, used for small-sized engine testing. Here NASA provides for both

Justin Roebuck

The control room in Building 64 at NASA Glenn Research Center.

John Reap

Ingersoll-Rand direct-drive duplex compound air compressors at NASA Glenn Research Center.

military and commercial engine testing and manufacturing. It also houses the Simulated Lunar Operations (SLOPE) Laboratory. The building has a variable frequency power system that was put in operation in 1942–43 to convert 60 cps to 10–120 cps. The group toured this and all of the equipment and controls in the lower level of this building, with thorough presentations on the history and operation of the system by several employees.

The banquet was held at **Grey Lodge of the Akron Woman's City Club**, where a buffet BBQ-style dinner was served. The guest speaker for the closing program was Mac Love, Co-Founder and Chief Catalyst of Art x Love. He spoke about the Akron Stories project, which celebrates the people who made Akron the "Rubber Capital of the World," and he featured several of the oral histories that were collected during the project.

The SIA thanks the many volunteers and organizations who made this Fall Tour possible. Thanks to local organizers Ron Petrie and Mary Starbuck, and the many businesses, sites, and presenters that welcomed our group and provided tours and many interesting discussions. Thanks also to members of the SIA national leadership committee: President Arron Kotlensky, Vice President Fred Quivik, Past President Saul Tannenbaum, Executive Secretary Steve Walton, Events Coordinator Courtney Murtaugh, SIA Headquarters Manager Daniel Schneider, and Interim Headquarters Manager Patrick McGowan.

For a collection of online resources related to the tour sites, see: *www.sia-web.org/activities/annual-fall-tour/past-fall-tours/akron-ft-23/*.

With contributions by Aron Eisenpress, Patrick Harshbarger, William McNiece, Tony Meadow, Ron Petrie, John Reap, Justin Roebuck, Mary Starbuck, Marni Walter, and Steven Walton

John Reap

Astro with building superintendent and tour leader Troy Guy. Astro is outfitted with a rotating high definition digital cam in a roll cage and sensing equipment for thermal and acoustic inspections.

John Reap

Exhaust ducts from PSL-3&4 test cells, looking from Building 64. The supply duct for the cells is the smaller-diameter line above the duct that makes the bend.

CONTRIBUTORS TO THIS ISSUE

James Bouchard, Montreal, Que.; Arlene Collins, Calumet, Mich.; David Dunning, Elkins, N.H.; Aron Eisenpress, New York, N.Y.; Bob Frame, St. Paul, Minn.; Mary Habstritt, New York, N.Y.; Patrick Harshbarger, Wilmington, Del.; Neill Herring, Jesup, Ga.; Barbara Howe, Morgantown, W.Va.; Janet Kemp, Morgantown, W.Va.; Ron Knapp, New Paltz, N.Y.; Arron Kotlensky, Pittsburgh, Pa.; Christopher Marston; Silver Spring, Md.; William McNiece, Indianapolis, Ind.; Anthony Meadow, Santa Fe, N.M.; Ron Petrie, Lakewood, Ohio; Fredric Quivik, Saint Paul, Minn.; John Reap, Sun City West, Ariz.; Justin Roebuck, Macedonia, Ohio; Daniel Schneider, Lake Linden, Mich.; Mary Starbuck, Kent, Ohio; Robert M. Vogel, Washington, D.C.; Steven Walton, Hancock, Mich.; Suzanne Wray, New York, N.Y.; Helena Wright, Washington, D.C.

With Thanks.

Publications of Interest (continued from page 8)

more than 200 lithographs, paintings, and historic and modern photographs. Rev.: *New York Almanack* (Oct. 24, 2023) *https://www.newyorkalmanack.com*.

Buildings & Structures

- Richard Cahan and Michael Williams. **Lost in America: Photographing the Last Days of Our Architectural Treasures.** CityFiles Pr., 2023. 208 pp., illus., $40 hardcover. Documents 100 buildings that have been torn down over the past 90 years. Some, like New York's Penn Station and Chicago's Stock Exchange, were majestic. Others, like a tiny bridge in rural Montana and a small farmstead razed for Denver's International Airport, were modest. But they all reflected America's story. Based on photographs taken between 1933 and the present by the Historic American Buildings Survey, the book presents a timely look at what we've lost. Rev: *NY Review of Books* (Nov. 9, 2023).

Agriculture & Food Processing

- Peg DeGrassa. **Newlin Grist Mill's Archaeology Festival Features Fun and Learning for All Ages**. *Delaware County Daily Times* (Aug. 27, 2023). *https://www.delcotimes.com*. Historic Newlin Grist Mill (recipient of SIA's DeLony Industrial Heritage Preservation Grant in 2019; see *SIAN* Vol. 49, No. 2, 2020), in partnership with the Delaware County Planning Dept., held its annual Archaeology Festival on Sept. 9. The event included displays of archeological materials and information about excavations that have been conducted in the region by local organizations, presentations by professional archeologists, and a kids' dig and pottery assembly activities for younger visitors.

Power Generation

- **Appreciating Tide Mill Art.** *Tide Mill Institute* (Sept. 15, 2023). *www.tidemillinstitute.org/appreciating-tide-mill-art/*. Two tide mill paintings by Victorian artist Alfred Omega Townsend (1845–1917) of a tide mill in Falmouth, England, can be viewed on the TMI website courtesy of British film maker and writer Colin Collis. A third contemporaneous image of the mill, by William J. Boase Smith (1842–1896), can also be viewed via a link therein to the Falmouth Art Gallery.

- **Windmillers' Gazette**, Vol. 42, No. 4 (Autumn 2023) includes T. Lindsay Baker, *A. Clyde Eide (1925–2023): The Engineer Who Laid the Foundation for Historic Windmill Preservation in America*; A. Clyde Eide, *A Strange Windmill Vignette* (Eide's final "Windmill Vignette," one of his many contributions to the Gazette); Michael Werst and Christopher Gillis, *W. G. Dunn's 'Slip the Wind' Wind Generator*; and Christopher Gillis, *Fractured Cast Iron Windmill Parts*. Avail.: $20/yr., published quarterly. Christopher Gillis, Editor, P.O. Box 788, Buckeystown, MD, 21717; *www.windmillersgazette.org*.

Misc. Industries

- Brandt Zipp. **Commeraw's Stoneware: The Life and Work of the First African-American Pottery Owner.** Crocker Farms, 2022. 311 pp., illus. $95. Stoneware manufacturer Thomas W. Commeraw's work has been collected by American museums since the early 20th c. without knowing that he was African-American. The author's chance discovery of this fact has launched a re-examination of the artist and manufacturer who was also an abolitionist and hopeful founder of a new African republic.

- Stephen Betts. **Dragon Products Owner Announces Plan To Close Thomaston Cement Plant**. *Portland Press Herald* (Sept. 6, 2023). *https://www.pressherald.com*. The owner of Dragon Products cement plant in Thomaston (Me.), Giant Cement Holding, Inc., says phased layoffs at the facility will begin in Dec. 2023 and conclude by the beginning of 2025. Alfred Black started the company as the New England Cement Co. in the early 1900s. Includes plentiful details about the history of the facility, which has been operational for nearly a century.

Abbreviations:

IA News = Bulletin of the Association for Industrial Archaeology (U.K.), *www.industrial-archaeology.org*.
MHJ = *Mining History Journal*, published by the Mining History Assn.
NYT = *New York Times*
SCA = Society for Commercial Archeology
TICCIH = The International Committee for the Conservation of the Industrial Heritage, *https://ticcih.org*.
TT = *Timber Transfer*. Published by Friends of the East Broad Top. Avail. with membership. $30/yr. *www.febt.org*.
WSJ = *Wall Street Journal*

Publications of Interest *are compiled from books, articles, and digital media brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books, articles, CDs, DVDs, etc., especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. Publications of Interest, c/o* Marni Blake Walter, Editor, *SIA Newsletter*, 11 Esty Rd., Westmoreland, NH 03467; *sianeditor@siahq.org*. ■

DELAWARE SHIPYARD (continued from page 12)

more than double the minimum wage, or more than $14.50 per hour in 2023. For comparison, in an advertisement in *The Philadelphia Inquirer* on Oct. 9, 2022, a marine and industrial contractor located at the former Philadelphia Navy Yard offered $23 to $28 per hour for welders, pipe fitters, ship fitters, and maintenance technicians. At Sun Ship in 1972, a ship fitter first class and a pipe fitter first class were paid $4.19 per hour, or $30.84 per hour in 2023. Third-class ship fitters and pipe fitters were paid $3.85 per hour, or $28.34 in 2023.

The final ship completed by Sun was launched in 1979. The property was the subject of an asset sale by Sun Co., Inc. in 1982.

The author performed a Phase I Environmental Site Assessment of the original shipyard in 1990, shortly after the beleaguered Pennsylvania Shipbuilding Co. had discontinued operations. At that time, Walter Smith was the property caretaker and a long-time Sun employee. The author asked Smith what he and his fellows thought when they learned the actual purpose of *Hughes Glomar Explorer*. "We were surprised" was all he said, with an innocent laugh (see *Nautical Research Journal*, Vol. 38, Nos. 2 and 3 [1993]).

Wooden sign (39 × 20 in.) salvaged by the author in 1990. According to the Work and Safety Guide, Dept. 95 was the Heating Plant, which implies that the Pump House drew raw feed water from the river for use in the boiler house.

Metro Machine of Pennsylvania Inc. bought the original property in 1994, with ambitions to build double-hull tankers following the *Exxon Valdez* disaster of 1989 and the resulting federal Oil Pollution Act of 1990. Sun referred to such ships as "ecology tankers" during the 1970s.

Most of the shipyard of 1916 (the Central Yard; Shipways 1 through 8) is now the site of Harrah's Philadelphia Casino & Racetrack (see *SIAN* Vol. 36, No. 1, Winter 2007). The buildings in this area were removed around 2005, but all four wet basins apparently remain.

The main expansion of WWII was the North Yard and its integral No. 4 Yard (Shipways 13 through 28), where Black Americans were trained and employed as shipbuilders during WWII. The southern area of the North Yard has been a marine terminal with a marginal wharf since 1986. Two commercial buildings were constructed in the northern area of the North Yard in 2022. Only the south section of the WWII shed is still standing, where storage, fabrication, and assembly had taken place. Shipway foundations are awash on the Google Earth aerial photo of Aug. 14, 2018.

Almost all of the author's Sun-related material was acquired by the Historical Society of Pennsylvania in 2016.

The wet basins of WWI, the remaining portion of the great shed of WWII, and the shipway foundations are relic monuments to the workers who earned their wages at a great American shipyard during and after both world wars.

Michael Bernstein

IA ON THE WEB

Abandoned America (*www.abandonedamerica.us*). Photographer Matthew Christopher has been documenting abandoned places since 2006. Industrial sites include Simon Silk Mill, Easton, Pa.; Fisher Body Plant 21, Detroit, Mich.; Gould Street Power Station, Baltimore, Md.; Remington Arms Munition Factory, Bridgeport, Conn.; Chemung Mine, near Masonic, Calif.; Bethlehem Steel Lackawanna Plant, Lackawanna, N.Y.; Golaski Labs, Philadelphia, Pa.; and many others. Matthew works with the property owners to legally gain access to sites; workshops are available occasionally.

International Society for Photogrammetry and Remote Sensing (*www.isprs.org/*), devoted to the development of international cooperation for the advancement of photogrammetry and remote sensing and their applications. The society provides access to the papers from their conferences, some of which are of particular interest to SIA members. Examples include: "International Conference on Vernacular Architecture in World Heritage Sites," *Risks and New Technologies* (Vol. XLIV-M-1-2020) and 29th CIPA Symposium "Documenting, Understanding, Preserving Cultural Heritage. Humanities and Digital Technologies for Shaping the Future" (Vol. XLVIII-M-2-2023, 2023). Also includes links to tutorials and other educational information.

Pittsburgh Had a Hand in the Development of Atomic and Nuclear Energy (*https://www.cbsnews.com/pittsburgh/news/pittsburgh-development-atomic-nuclear-energy/*). KDKA TV video segment (Sept. 23, 2023) by reporter Christopher DeRose about Pittsburgh's early involvement in the development of atomic and nuclear technologies. Marni Blake Walter [SIA] is interviewed about the role of Westinghouse Electric and Mfg. Co. and its historic Atom Smasher.

IA on the Web *is compiled from sites brought to the editor's attention by members, who are encouraged to submit their IA Web finds:* sianeditor@siahq.org ■

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CALENDAR

2024

Apr. 10–13: 2024 National Council on Public History Annual Meeting, Salt Lake City, Utah, and virtual, late April 2024 (virtual is jointly with the Organization of American Historians). Info: *ncph.org*.

Apr. 17–21: Society of Architectural Historians Annual International Conference, Albuquerque, N.M. Info: *www.sah.org*.

May 16–19: SIA ANNUAL CONFERENCE, MINNEAPOLIS, MINN. Info: *www.sia-web.org*.

June 5–9: Mining History Association Annual Conference, Park City, Utah. Info: *www.mininghistoryassociation.org*.

June 24–26: World Canals Conference, Bydgoszcz, Poland. Info: *inlandwaterwaysinternational.org*.

July 9–14: Society for the History of Technology Annual Meeting, Viña del Mar, Chile. Info: *www.historyoftechnology.org*.

(TBD) Aug.: National Railway Historical Society Convention, Harrisburg, Pa. Info: *nrhs.com/convention/*.

Sept. 20–22: Society for Commercial Archeology 2024 Roadtrip: A Walk Through Nashville's Neon Canyon, Nashville, Tenn. Info: *sca-roadside.org*.

Sept. 21–26: 16th Symposium of the International Molinological Society, Ponte de Sor and Valongo, Portugal. Info: *www.molinology.org*.

Oct. 4–6: Association for Industrial Archaeology Conference, Cardiff, U.K. Info: *industrial-archaeology.org*.

2025

Sept. 23–26: Early Railways 8: International Conference on Early Railways, Darlington, U.K. Info: *rchs.org.uk/early-railways-conference-combined/*.