

# SOCIETY FOR INDUSTRIAL ARCHEOLOGY NEWSLETTER

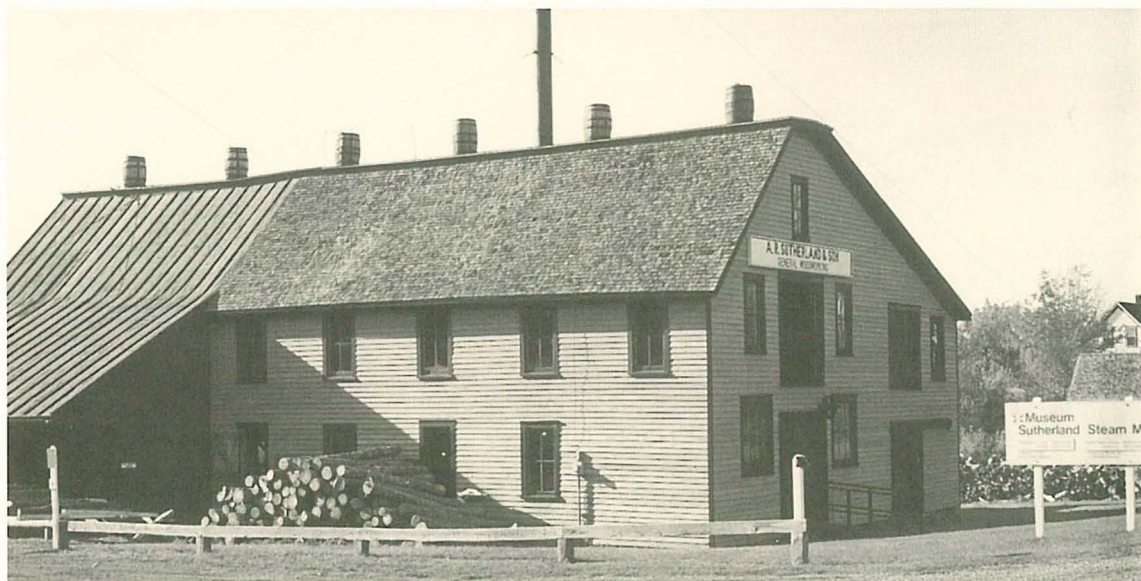
Volume 24

1995

Number 4

October 4-8, 1995

## SIA Fall Tour discovers industrial heritage of Nova Scotia

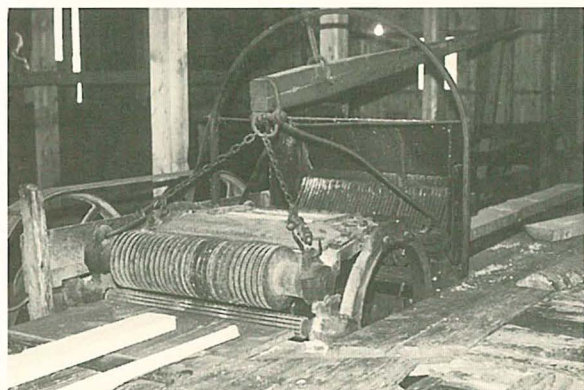


SUTHERLAND STEAM  
MILL, Denmark, N.S.

*Left:* The 1894 mill building  
of A.R. Sutherland & Son,  
now a property of the Nova  
Scotia Museum of Industry.  
*D.A. Simmons photo.*

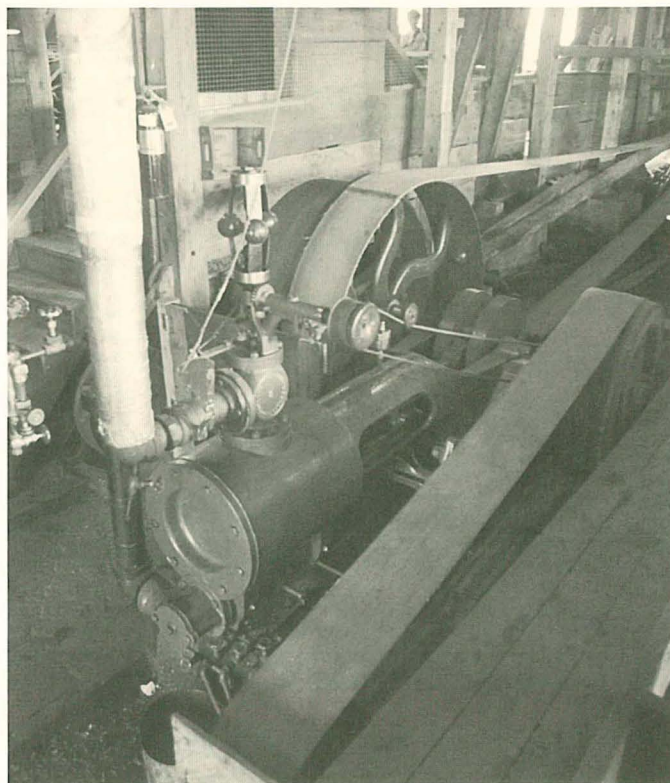
*Left below:* Planing and  
edging machine. *D.A.  
Simmons photo.*

*Below:* One of the mill's  
steam engines, viewed  
during the Fall Tour. *D. Hay  
photo.*



Three busy and eventful days of process tours awaited the 48 SIA Fall Tour registrants convening at the recently opened **Nova Scotia Museum of Industry** in Stellarton, Pictou County, on Wednesday evening, Oct. 4. Many toured the marvelous hands-on industrial exhibits at the museum, which occupies a coal mine site, including the remnants of a stone hoist-house. The exhibits include water wheels (with flowing water) and two early standard-gauge locomotives, the *Samson* (1838) and the *Albion* (1854).

Thursday morning's first stop—Pugwash—followed a two-hour bus ride along the picturesque Sunrise Trail. This modest burg is home to **Seagull Pewter & Silversmith Ltd.**, manufacturer of







STANFIELD'S LIMITED, Truro.

*Left:* Stanfield's building where knitted underwear is manufactured.

*Left below:* The sock knitting department.

*Right:* Attaching waistbands to garments in the underwear assembly department. D. Hay photos.



hand-crafted gift items. It is operated by an expatriate American couple with a 1970s social consciousness. Company legend has John Caraberis, part-owner and unofficial mayor of Pugwash, peddling a wheelbarrow of crafts at Woodstock, N.Y., in 1969, to start the business. Conferees got an intimate view of mold production and of the casting and finishing processes for various goods.

Following a brief visit to the outlet store (immediately adjacent to the **Canadian Salt Mines**, closed for an early celebration of the Canadian Thanksgiving holiday), we toured the **Jost Vineyards & Winery** on Malagash Peninsula. Our guide at this family-owned operation was Mr. Jost himself, an Arnold Schwarzenegger look-alike, complete with Austrian accent, whose delightful sense of humor and willingness to share his vast technical knowledge reaffirmed the old adage that an IA tour is often only as good as its guide.

With a tasty luncheon of German sausage and kraut, washed down with Jost wine samples, we visited one of the conference highlights: the **Sutherland Steam Mill** at Denmark. This 1894 steam-powered saw and woodworking shop is now a branch of the N.S. Museum complex. Staff fired up the two small engines that operate the machinery, much to the delight of the conferees, and explained the mill's operation in detail.

Friday's tours at Truro began with **Stanfield's Limited**, a maker of knitted underwear sold throughout Canada. After the requisite

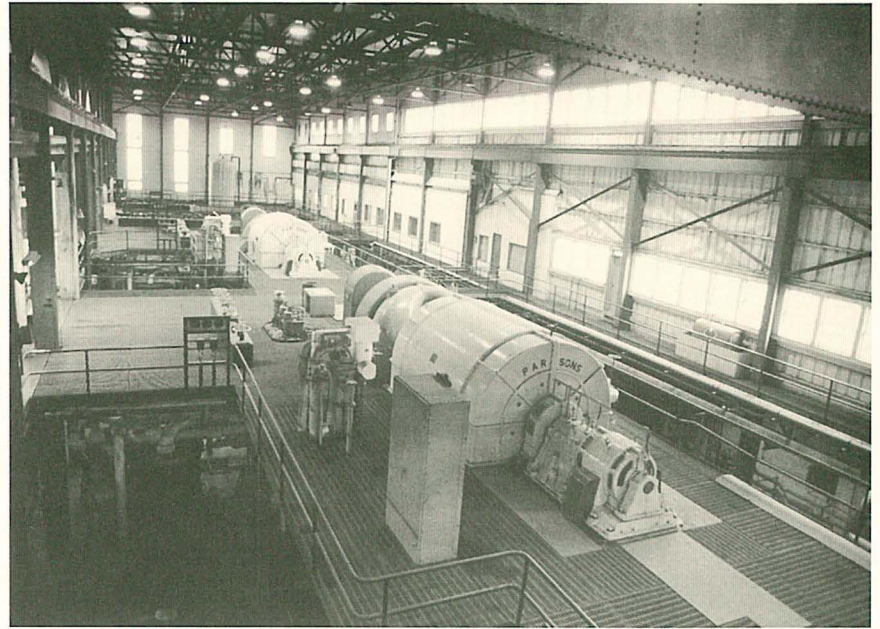
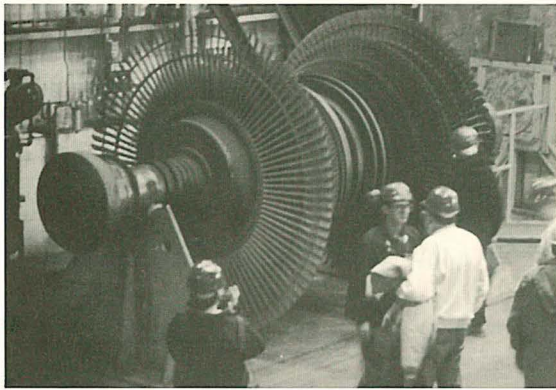
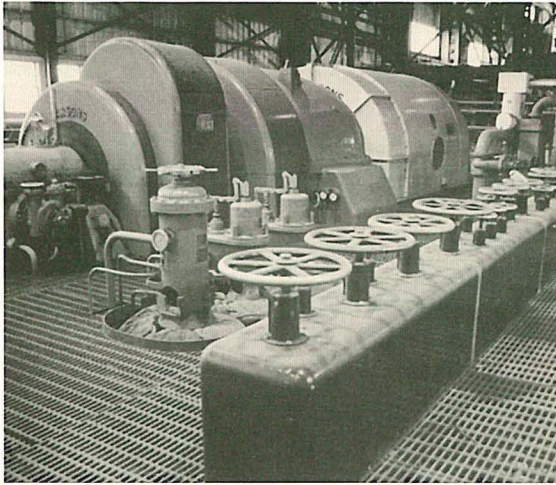
stop at the firm's outlet store, lunch was served at a restaurant where the famous "**Tidal Bore**" could be viewed. Unfortunately at that time of year, the height of the returning wave was more a "bore" than a "Bore."

The afternoon tour was at **Crossley Carpet Mills Ltd.**, where we gained an in-depth understanding of the manufacture of high quality woven and tufted carpets, both products of this mill. An elegant and substantial dinner at the Museum rounded out the day, along with a lengthy slide presentation by Wayde Brown, the heritage officer for the **N.S. Dept. of Municipal Affairs** (equivalent to a State Historic Preservation Office in the U.S.). Of interest to SIAers was the agency's handsome handout: *Industrial Heritage of Nova*

A crane standing at the idle steel mill site on the East River at Trenton. D.A. Simmons photo.







NOVA SCOTIA POWER.

*Above :* Views of the generating floor at the coal-fired Trenton plant, showing the Parsons turbines.

*Left :* SIA visitors examine a steam turbine runner. *D. Hay photos.*

*Scotia: A Selection of Provincially Registered Heritage Properties* (avail. from Brown at D.M.A., POB 216, Halifax NS B3J 2M4).

Saturday morning's tour of **Michelin Tire** at Granton was unique because conferees weren't allowed in the production area for safety reasons. After driving around the plant's exterior, we were invited into the cafeteria to view a video of the process and could handle samples of the raw materials. We were assured that this gave a far more intimate view than if we actually had been on the shop floor. The assembled SIAers responded by intensely grilling the company representatives for a solid hour with a myriad of technical and economic questions.

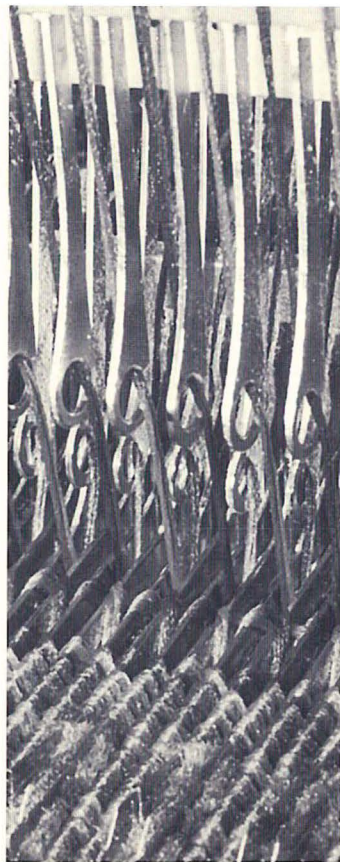
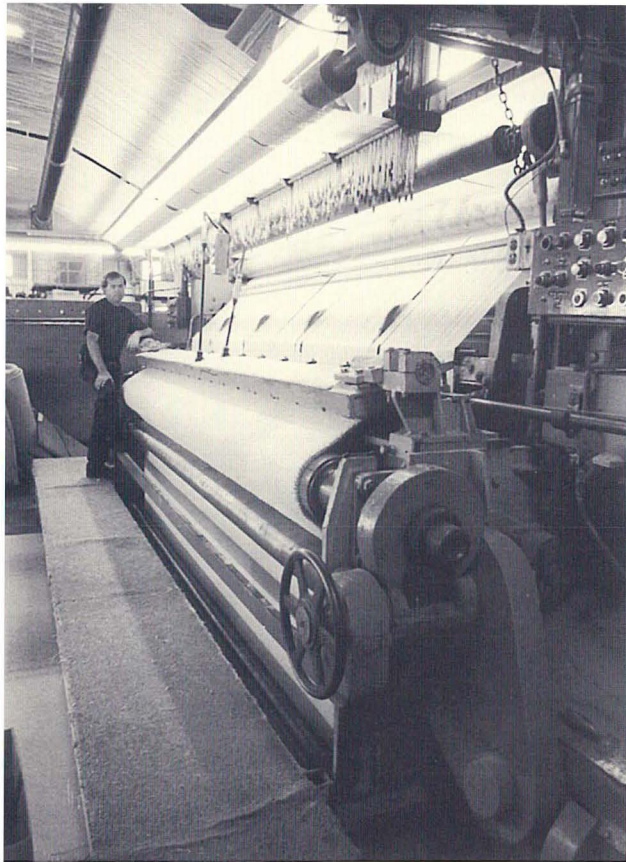
Lunch was in the historic heart of the village of Pictou, where we toured the **Grohmann Knives** factory, a maker of hand-crafted cutlery since 1957. Here also was the ongoing reconstruction, presented as an outdoor museum exhibit, of the **Hector**, the 110-ft. wooden sailing ship that brought Scottish immigrants to the harbor in 1773.

As rain clouds moved in, we boarded a touring boat (ironically named the **Sun Catcher**), for a tour of the harbor and a trip up the East River. We passed the **abandoned steel works at Trenton** and docked at New Glasgow. Returning to buses, we headed for Nova Scotia Power's **Trenton generating station**, a coal-fired electrical

The ongoing reconstruction of the sailing ship **Hector**, presented as an outdoor museum exhibit at the village of Pictou. The original 110-ft. ship brought Scottish immigrants in 1773. *D.A. Simmons photo.*







# CROSSLEY CARPET MILLS, Truro.

*Left: Carpet loom.*

*Center: Carpet loom close-up, showing the knives that produce cut-pile carpeting.*

*Right: Inspecting and burling. D. Hay photos.*

plant. After an in-depth tour of coal handling, burning, and environmental procedures, we left with “Louie the Lightning Bug” comic books and a box of “Trenton Power Plant” glass tumblers.

The conference finale come in the form of a sumptuous lobster dinner in Stellarton. Thus weighted down with an assortment of samples, souvenirs, and publications, we headed home, remembering our informative three-day tour of Nova Scotia’s diverse and impressive industrial base.

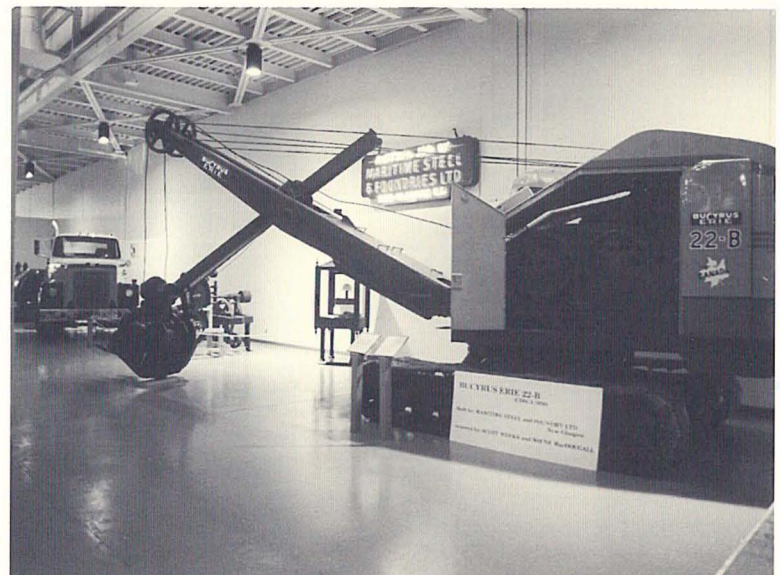
*D.A.S.*



# NOVA SCOTIA MUSEUM OF INDUSTRY, Stellarton.

*Left: Exhibit of ingot molds from Sydney Steel.*

*Below: Bucyrus Erie 22-B, built c1950 by Maritime Steel & Foundry Ltd., New Glasgow. D. Hay photos.*





# BOOM TIMES FOR BUTTE

## Quivik reports preservation success in wake of 1989 SIA tour



Cross your fingers, because the SIA jinx of post-tour demolition disasters has yet to strike Montana. Here are some positive developments following the SIA Fall Tour of Butte and Anaconda in 1989.

The size of **MRI's East Continental open-pit copper mine** has grown considerable and the water in the old Berkeley Pit continues to rise. Sites associated with the older era of underground mining are changing as well, largely due to two factors: the Butte and Anaconda Superfund clean-up, administered by the Environmental Protection Agency (EPA), and the efforts of community groups to develop a historic industrial park system.

This cleanup of copper mining and smelting wastes covers the largest acreage of any Superfund project in the U.S. One of the most prominent efforts within the program is the construction of an 18-hole golf course (designed by Jack Nicklaus) along Warm Springs Creek in Anaconda, near the ruins of the 19th-cen. smelting works that predated the giant Washoe smelter. (The Washoe began operations in 1902 and is best known today for its 585-ft. stack, a State Monument and the site's only surviving structure.) The old works left thousands of tons of hazardous tailings along the Warm Springs flood plain. The gold course is intended to treat the tailings in place so they will not erode into surface water and to provide a long-term use for the area that will insure institutional controls for the hazardous materials remaining in place. At the recommendation of local preservationists, Nicklaus is filling the traps with granulated slag from the site instead of the traditional sand. The entire course is designed on a smelter theme and an interpretive trail is planned through some of the stonemasonry ruins of mill and smelter buildings bordering the course. Not all the news is good, since the sixth-hole fairway will run through the ruins of a smelter building and archeological mitigation was not conducted before the ruins were disturbed.

Another of the Superfund's efforts involves the former sites of the **Butte Reduction Works (BRW)** and the **Colorado smelter**, two of Butte's half-dozen large 19th-cen. smelters. Designated by the EPA in colorful bureaucratese as "Lower Area One," the site consists of large slag and tailings deposits from both smelters, foundation ruins of the BRW, and an extensive system of slag walls



*Above left:* Jack Nicklaus tries a chip shot from a sand-trap filled with Anaconda slag, made by pouring the molten material from furnaces into rapidly flowing water. The technique provided easier discharge—and created superior trap material, judging from Nicklaus's comment that the black slag was better than ordinary sand. *Photo courtesy Walter Hinick, The Montana Standard.*

*Above right:* An early-20th-cen. "slag canyon" built by the Butte Reduction Works to convey Silver Bow Creek through the smelter property. In the foreground is a concrete culvert portal. Other culvert sections later were constructed of cast-in-place slag. *Photo by Mark Reavis, Butte-Silver Bow Hist. Pres. Office.*

built c1900 to prevent tailings from flowing into Silver Bow Creek. An important part of that system is a "slag canyon" through which the creek flows. EPA's initial idea was that all the wastes should be removed from Lower Area One, but during public hearings to consider the remediation plans, the EPA learned from the community that the slag walls and the slag canyon are the most prominent surviving evidence of Butte's once thriving smelting

Rising behind this Butte, Anaconda & Pacific boxcab electric locomotive is the Anselmo mineyard headframe. The BA&P was the first U.S. road to electrify its entire mainline (26 miles) and the first to use such a high voltage (2400 volts DC) to power its locomotives. Behind the locomotive are an electric helper, an ore car, and a BA&P caboose. *Photo by Mark Reavis, Butte-Silver Bow Hist. Pres. Office.*

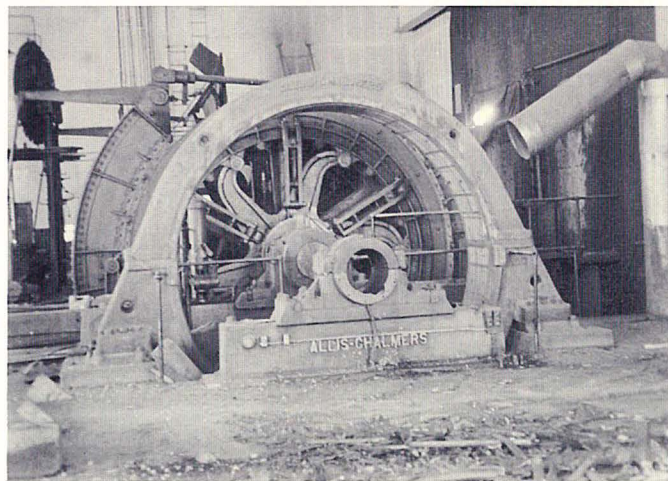




industry and that those slag features are an important facet of community plans to develop a historic industrial park system for preserving and interpreting the area's industrial history. EPA now has agreed to a remediation design which leaves the slag structures in place and eventually will allow public use and interpretation of the site.

Advocacy for the historic industrial park system is being coordinated by **First Montana Heritage Park & Partners**, a coalition formed after an ad hoc collection of community groups convinced the state legislature to declare Butte, Anaconda, and the corridor linking them, as Montana's first officially designated area, similar to a National Heritage Area. First Heritage Park & Partners also is working with community groups, local governments in several surrounding counties, and federal agencies to obtain congressional authorization for a NHA in southwestern Montana encompassing a much broader range of mining history themes.

Perhaps the most important preservation project nearing completion in Butte is the rehabilitation of the **Anselmo mineyard**, which the SIA toured. The most intact mineyard from the city's historic period, the Anselmo has been abandoned by the Anaconda Copper Mining Co. (ACM) and lodged a variety of hazardous materials and unsafe conditions. Marshaling funding from a variety



This is how the hoist engine at the Mountain Con mine looked when local officials discovered that the mining company had scrapped the electric motor. Photo by Mark Reavis, Butte-Silver Bow Hist. Pres. Office.

of reclamation programs and granting agencies, Butte preservationists have now rehabilitated the major structures, removed hazardous materials and unsafe conditions, and opened the Anselmo to visitors with regular hours and guided tours during the tourist season. The community also has discovered that the hoist house is a wonderful venue for celebrations, of which a recent polka dance is a fine example.

Another major Butte project is the construction of the **Memorial to the Granite Mountain Disaster**, which was dedicated on Miners' Union Day in June. SIA tourers from 1989 will remember the view from the overlook at the top of the Butte Hill of the Granite Mountain and other headframes and of the millions of tons of material dumped from the Berkeley Pit to fill the headwaters of Silver Bow Creek. The Granite Mountain was the scene of the worst hardrock mining disaster in U.S. history, when 168 miners died underground in 1917. To help today's observers understand the emotional trauma this caused in Butte, speakers pointed out that this was identical to the toll from the recent Oklahoma City bombing. The memorial will include plaques with lines from letters some dying miners wrote to their loved ones before they perished.

Butte's most recent preservation success has been the deeding of several of the most significant mineyards from the Montana Mining Properties to the local government. The 100-year lease on the Anselmo has been converted to a deed of the property. Also deeded are the **Original** and the **Stewart mineyards**, both housing c1900 steam hoists (SIA toured the Stewart), and the **Mountain Consolidated**, the first Butte mine to reach a mile in depth. Unfortunately, much of the Mountain Con's electric hoist engine was scrapped before negotiations began for the title transfer. In a separate transaction, MRI, operator of the **East Continental Pit**, deeded the Belmont's hoist house to the local government, which secured a federal grant to adaptively reuse the building as a senior citizens' center.

Meanwhile, the tourist railroad ridden by SIA tourers still operates, after overcoming new hurdles imposed when tourist railroads were placed under the safety rules for freight lines of the Federal Railroad Admin. The **Butte Historical Society** continues to expand the number of headframes it lights during the holiday season, taking over a task started by the ACM when the company was in a paternalistic relationship with the community.

*F.L.Q.*



Above: The nearly completed monument to the Granite Mountain disaster, with the Granite Mountain headframe visible at lower right. Commemorative plaques will be placed on the concrete piers around the overlook's perimeter.

Below: A view of Butte Hill, showing several headframes: the Original (left), Stewart (center), and Mountain Con (barely visible on horizon between Original & Stewart). The Diamond (center right, on horizon) and the Kelly (partially behind building at right) remain in company hands. Photos by Mark Reavis, Butte-Silver Bow Hist. Pres. Office.





## NOTES & QUERIES

**HISTORIC FILM FOOTAGE** is sought for **Heavy Metal: The History of Iron & Steel in Cleveland**, an exhibit scheduled to open at the Western Reserve Historical Society in April 1997. The exhibit development team is comprised of Ed Pershey, curator, and interns Jeff Larabee and Chris Dawson. The team is seeking moving images of iron and steel processes earlier than known films from the 1930s-50s and later, which were shot at Republic Steel in Cleveland and other locations. Of particular interest are films of older processes, such as puddling, 19th-cen.-style rolling mills, and Bessemer converters. Please send any information to Pershey, WRHS, 10825 East Boulevard, Cleveland OH 44106 (216-721-5722 x251; e-mail: [pershey@en.com](mailto:pershey@en.com)).

**HISTORIC IRONMAKING CONF.** The 2nd Annual Highlands Historical Conf. on Historic Ironmaking is scheduled for Oct. 19-20, 1996, at Skylands Manor Annex, Skylands Section, Ringwood State Park, N.J. Paper proposals must be submitted by Aug. 1 to Edward J. Lenik, c/o Sheffield Archaeological Consultants, POB 437, 24 High St., Butler NJ 07405 (201-492-8525).

**IRONWORKS ROLLING MILLS.** "I'd like to contact anyone interested in the technology of bar, plate, or sheet rolling mills in the U.S. 1850-65." Keith W. Bennett, 49 Lakeview Place, Lake Zurich IL 60047 (708-438-6553).

**POOLE & HUNT QUERY.** "I have been working for almost 30 years on the history of the U.S. munitions industry and noted with great interest the photo of Poole & Hunt in the SIAN story on the Baltimore conf. During the Civil War P&H had gov't contracts for cannon projectiles. I am interested in any history of P&H, especially any prepared for the conf. tour." George G. Kass, 4512 Nakoma Dr., Okemos MI 48864 (517-349-9362, fax 517-349-8208).

**STUDY TOUR ANNOUNCEMENTS.** Dr. Hans-Peter Bartschi of the Gesellschaft für Industriekultur in Winterthur, Switzerland, extends an invitation to SIA members to join a study tour of **industrial culture in the Swiss Alps**, planned by the Swiss Society for History of Technology & Industrial Culture (SGTI) and the German Society for Industrial Culture (Duisburg). Travel will be largely by train through the spectacular Swiss Alps, including short trips to France and Italy. Beginning in Basel, touring the museums of navigation, paper, and tramways, the group will travel on to La Chaux-de-Fonds (watchmaking) and Besancon (18th-cen. saltworks) in France. Next is a boat ride across Lake Geneva, a tour of a Nestle chocolate factory, and a ride on the rack-railways of the Rigi. There's a tour of the Swiss Locomotive Factory in Winterthur. The tour concludes with visits to IA sites in Zurich. The tour is planned for Sept. 1-15, 1996, and costs should be about 1300 Swiss francs for one week, or SF 2400 for both weeks. Reservations will be accepted up to the third week of June and must include a deposit of SF 200 (1 week) or SF 400 (2 weeks). For additional information, including a detailed itinerary, contact Dr. Bartschi at Schlachthofstrasse 4, CH-8406 Winterthur, Switzerland (phone 052-202-02-27, fax 052-202-02-40).

Atalaya Tours announces its 1996 schedule of mining study tours, including: **"Rio Tinto & the Iberian Pyrite Belt"** (April 13-20); **"Northern Spain,"** including Roman gold mines in Leon, the Asturias mining field, and lead, zinc, and copper in Cantabria

& Leon (June 21-July 1); **"Mines of Andalucia & Southern Spain,"** including copper, silver, and lead in the Sierra Morena, lead-silver mines of Linares & Almeria; and the Cartagena/La Union district of Murcia (Sept. 1-12); **"Western Britain,"** including tin and copper in Cornwall and Devon, and gold, silver, copper, and lead in north Wales (Sept. 21-Oct. 1). A tour of **India**, including Rajasthan zinc and Kolar gold fields, is planned for winter 1996-97. For info. contact Atalaya Tours Ltd., Ceinionfa, Capel Dewi, Aberystwyth SY23 3HR U.K. (phone/fax +44-1970-82-89-89).

*Editor's note: SIA Board policy states that publication of a tour notice does not constitute Society endorsement or sponsorship.*

## SIA AFFAIRS

### Newsletter News

**Bob Frame** has served the SIA membership faithfully as newsletter editor since volume 12 in 1983, when the SIA's 12th annual conference was held in his home twin-towns of St. Paul and Minneapolis. With this issue, nominally his 50th, your obedient editor passes the SIA editorial charge forward to a new team. The editorial center of the Society now leaves the Midwest for Pennsylvania, where it risks making the town of Toughkenamon as internationally famous for IA journalism as it has made Minnesota. Please join the outgoing editor, and former editors Carol Poh Miller and Robert Vogel, in wishing industrial-strength success to incoming editor Patrick Harshbarger and an energetic new editorial team of associates.

Keep the new SIAN mailbox full by sending your stories, clippings, photos, notes, queries, citations, and calendar items to: Patrick Harshbarger, Editor, SIAN, PO Box 45, Toughkenamon PA 19374-0045 (610-268-3899, fax 215-752-1539, e-mail: [Phsianews@aol.com](mailto:Phsianews@aol.com)).

**GENERAL TOOLS AWARD NOMINATIONS WANTED.** The selection committee for the SIA's General Tools Award invites the membership to submit nominations for the 1996 General Tools Award for Distinguished Service to Industrial Archeology.

The General Tools Award recognizes *individuals* who have provided extended, outstanding service to the field of archeology, beyond only academic publication. Nominees do not have to be SIA members.

Nominations may be made by any SIA member in good standing. A nomination statement should not exceed three typed, double-spaced pages, and should address specifically the extent and quality of accomplishments that qualify the nominee for the award. Supplementary material may be appended. Nominations must also include the name, address, and phone numbers of the nominator.

The award was founded in 1992 through the interest and generosity of Gerry Weinstein [SIA], chairman of the board of General Tools Manufacturing, Inc., New York City, and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, predecessor firm to General Tools. The award consists of a commissioned sculpture featuring a polished General Tools plumb bob, and an honorarium of \$1,000. Previous recipients are Emory Kemp (1993), Robert Vogel (1994), and Ed Rutsch (1995).

Nominations must be received by *April 20, 1996*, by Fredric L. Quivik, Chair, General Tools Award Committee, POB 277, Froid MT 59226 (406-766-2246, fax 406-766-2205).



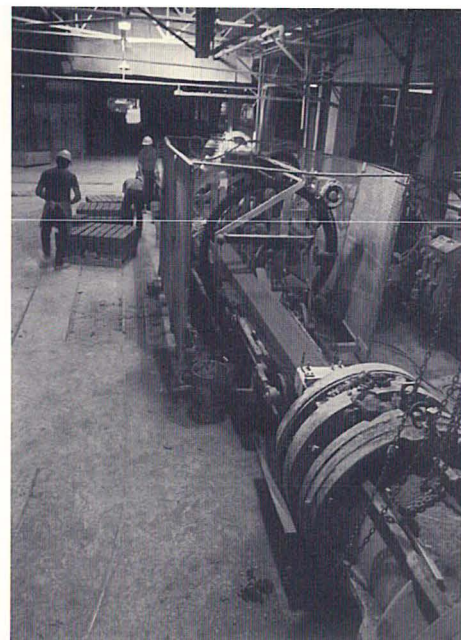
# California in '96



GLADDING McBEAN.

*Left:* Hard hats that are really hard: clay hard hats made in the slip-casting department.

*Right:* Brick-forming machine. In addition to architectural terra cotta and sewer pipe, GMcB produces clay roofing tiles, floor tiles, and shaped and common brick. *D. Hay photos.*



**DON'T FORGET, SIA ANNUAL MEETING, MAY 30-JUNE 2.** Plans are moving along for the 25th anniversary annual meeting of the SIA, hosted by the California State Railroad Museum in Sacramento. Among the major tour sites, in addition to CSRM, is the 411-acre clay-products plant of Gladding McBean in Lincoln, about 30 miles northeast of Sacramento. The firm's original product, clay sewer pipe, is a mainstay today, even though its architectural terra cotta is more widely known. Gladding McBean first manufactured its terra cotta in 1884. It also produces roofing tiles, floor tiles, flue liners, bricks, and garden pottery from local clay. For additional information, contact Cathy Taylor, CSRM, 111 "T" St., Sacramento CA 95814 (916-445-7387, fax 327-5655).

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 annually. SIA promotes the identification, interpretation, preservation, and re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual, \$35; couple, \$40; institutions, \$40; contributing, \$60; sustaining, \$125; corporate, \$250; student, \$20. Send check payable to SIA to Treasurer, 203 W. Burlington St., Bordentown NJ. All other *business correspondence* should be sent to SIA-HQ, Dept. of Social Sciences, Mich. Tech. Univ., 1400 Townsend Dr., Houghton MI 49931.

ISSN 0160-1067

Submission deadlines: Feb. 1 (Spring), May 1 (Summer), Aug. 1 (Fall), and Nov. 1 (Winter).

The *SIA Newsletter* is included in the *Avery Index to Architectural Periodicals*, *Avery Architectural & Fine Arts Library*, Columbia University.

Mailing dates for Vol. 24 (1995): No. 1, August; No. 2/3, December; No. 4, February. If you have not received an issue, apply to SIA-HQ (address above) for replacement copy.

**TO CONTACT THE EDITOR:** Patrick Harshbarger, editor, *SIA Newsletter*, P.O. Box 45, Toughkenamon PA 19374-0045 (610-268-3899, fax 215-752-1539, e-mail: [Phsianews@aol.com](mailto:Phsianews@aol.com)).

## CALENDAR

1996

**Mar. 23:** 3rd Annual Winter Symposium, Three Rivers Chap. SIA, W. Va. Univ., Morgantown. Regional themes, including: trans., iron & steel, navigation & maritime hist., coal & coke, glass, social hist. Paper proposals due Jan. 31. Info. & proposals: Lee Maddex, Winter Symposium, WVU, Morgantown WV 26505 (304-392-3829, fax 293-2449, e-mail: [lmaddex@wvnm.wvnet.edu](mailto:lmaddex@wvnm.wvnet.edu))

**May 30-June 2:** SIA 25th Annual Conference, Sacramento, California. Hosted by the Calif. State RR Museum. Info.: Cathy Taylor, CSRM, 111 "T" St., Sacramento CA 95814 (916-445-7387, fax 327-5655).

### CONTRIBUTORS TO THIS ISSUE:

Mary Habstritt, University of Minnesota; Duncan Hay, Boston, Mass.; Walter Hinick, *The Montana Standard*; Fredric L. Quivik, Froid, Mont.; Mark Reavis, Butte-Silver Bow [Mont.] Historic Preservation Office; David A. Simmons, *Timeline*, Ohio Historical Society; and Cathy Taylor, California State Railroad Museum;

With thanks.

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