

Newsletter

Samuel Knight Chapter
Society for Industrial Archeology
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The Newsletter is published in April, August, and December with special issues when they are needed.

The Chapter web site is hosted by the SIA headquarters site:
<http://www.sia-web.org/chapters/knight/knight.html>

Chapter News

Newsletter Update

No, you didn't miss the Newsletter. A bunch of things all got together and have delayed the planned August issue until now. My apologies.

We are ALWAYS looking for content for the Newsletter. Feel free to share your experiences, insights, trips, book reviews, etc. that might be of interest to our Chapter Members and friends. Contact Jay McCauley if you'd like to contribute something.

A Note from Jay

I wanted to thank everyone for being given the chance to serve as Member of the Board of Directors of the SIA. It is a real honor. I certainly want to try to faithfully represent your interests to the Board. If you have issues, concerns or just want me to express something, please contact me. Board meetings are roughly quarterly, and email exchanges occur in between.

Upcoming Chapter Event: December 3, 2005, Tour of National Archives and Records Administration (San Bruno) and a visit to the Hiller Aviation Museum

On Saturday, December 3 we're going to have two different events. We hope you can join us for both. Let Tony know if you plan to attend, if we have a big enough group, we can get a special tour at the Hiller Museum. If you have special interests at NARA, do let Tony know in advance.

If you need to reach us on Saturday please call Tony Meadow at 510.334.8161 (cell) or Jay McCauley at 408.981.8678 (cell).

10 am: National Archives and Records Administration (NARA) – San Bruno

You may be familiar with the National Archives in Washington, DC, where original copies of the Declaration of Independence and the Constitution are on display. The National Archives and Records Administration (NARA) actually has 33 facilities in total, located around the USA. We will visit our local branch in San Bruno. This facility stores many historical documents and records created by agencies of our Federal government.

If you are doing historical research, NARA may have primary source documents that will be important to your project. The holdings in San Bruno include Federal records from northern and central California, Nevada (except Clark County), Hawaii, American Samoa and the Trust Territory of the Pacific Islands. These records are a major primary resource for the study of Asian-Pacific immigration, environmental, naval, Native American, and many other aspects of American history.

We will get an overview of what kinds of records they store and how they are selected (only a small fraction of all records are worthy of being stored). One of the archivists will also explain how to access the records. Come learn how to take advantage of this local resource.

You may find it helpful to look at some of their web pages before coming. The main web page for the agency is <http://www.archives.gov/>. The pages about the San Bruno facility are located at <http://www.archives.gov/pacific/san-francisco/index.html>.

Address:

1000 Commodore Drive, San Bruno, California 94066-2350.

Details:

This tour will begin at 10 am and take about 2 hours. Please try to arrive on time.

Lunch

We'll pick a place somewhere in between the two venues, possibly Hobie's on the 101 East Frontage road just south of the Ralston/Marine World Parkway exit.

2 pm: Hiller Aviation Museum – San Carlos

In the afternoon we'll tour the Hiller Aviation Museum, the newest and largest (indoor) aviation museum in California. The Hiller Aviation Institute & Museum was founded by helicopter pioneer Stanley Hiller Jr. in June 1998. As a result they have a healthy collection of helicopters and related materials.

Their collection of aircraft includes about 50 aircraft and numerous displays including:

- 1869 "Avitor" Hermes Jr. (first aeroplane to fly - unmanned)
- 1883, 1905, & 1911 gliders (Montgomery)
- 1911 Eugene Ely's Curtiss Pusher (the first plane to land on a ship).
- 1913 Lincoln Beechey's "Little Looper" (first aerobatics airplane).
- 1945 Hiller 360 (first inherently-stable helicopter to be licensed by the FAA).
- 1955 Flying Platform (first ducted fan, man-carrying, VTOL aircraft)
- 1956 XROE Rotorcycle (fully collapsible helicopter)
- 1970 Boeing 747 cockpit (interactive display)
- 1986 Boeing Condor (spy plane with 201-ft. wing span)

Their web site is located at <http://www.hiller.org/>. There is an admission fee of \$9 for adults and \$6 for seniors. You can print a coupon to

save one dollar by going to this web page:
<http://www.hiller.org/special-offer.shtml>.

Address: 601 Skyway Road, San Carlos, CA 94070

Directions (from San Jose): Take Hwy 101 north to Holly Street/Redwood Shores Pkwy exit. Go east onto Redwood Shores Pkwy. Turn right onto Airport Road. Turn right onto Skyway Road.

Details: We will meet in the front of the museum at 2 pm. If it's raining we'll meet inside!

Hope to see you all there! *TM*

Chapter Event: Annual Meeting, Willits, CA, September 10, 2005

The Chapter held its annual meeting at the Mendocino County Museum in Willits, CA during the annual Roots of Motive Power Festival. Since everyone REALLY wanted to see all the live steam and diesel action, the meeting was brief. Formal minutes are available from Jay McCauley, and have been distributed to the Board of Directors.

Jay McCauley proposed that we reduce the Chapter dues since there have been substantial reductions in the cost of Chapter publications and distribution. This requires a little research, and will be put forth for a vote by the Board.

We discussed a number of possible Chapter events/activities and assigned action items to various members to start organizing specific

events. The NARA/Hiller Museum event is the first of these new activities. As plans for these events firm up, members will receive more information.

The current officers were re-elected, and two new Directors, Ed Wishart and Chuck Quibell were elected. Welcome!

In a surprise visit, we were joined by Andy Fahrenwald, founder of the Chapter. It was great to see him!



Chapter Members – Tony Meadow, Sharon McCauley and Andy Fahrenwald

Overall, the Chapter is in good shape. We do need more activities, and more

help with newsletter content. It was great to see the enthusiasm in the room for helping keep the Chapter sound.

Roots of Motive Power Festival

Roots of Motive Power holds an annual Festival in which some of their large collection of steam-powered equipment is steamed up and operational. For anyone with an interest in steam, this is a must visit event! There were also a number of diesel-powered machines operating.

With its collection centered around the logging industry, there were a number of steam donkey engines. These could be skidded into place at a logging site and powered attached winches to move the logs (and themselves) around. It was a pleasant surprise to run into Chapter Member Ed Wishart tending one of the engines.



Chapter Member Ed Wishart tending a Donkey Engine



Mason County Logging #7

Also operating was a saddle tank logging steam engine, a Baldwin 2-6-2T purchased in 1910 as Mason County Logging #7. Pulling a small train around the grounds, the engine was a favorite of the visitors.

One of the most fascinating machines was a huge diesel “yarder”. These portable diesel engines replaced steam donkeys starting in the late 1920s. The engine is rated at 200 hp. It

was quite impressive when the cylinders were firing.



Diesel Yarder

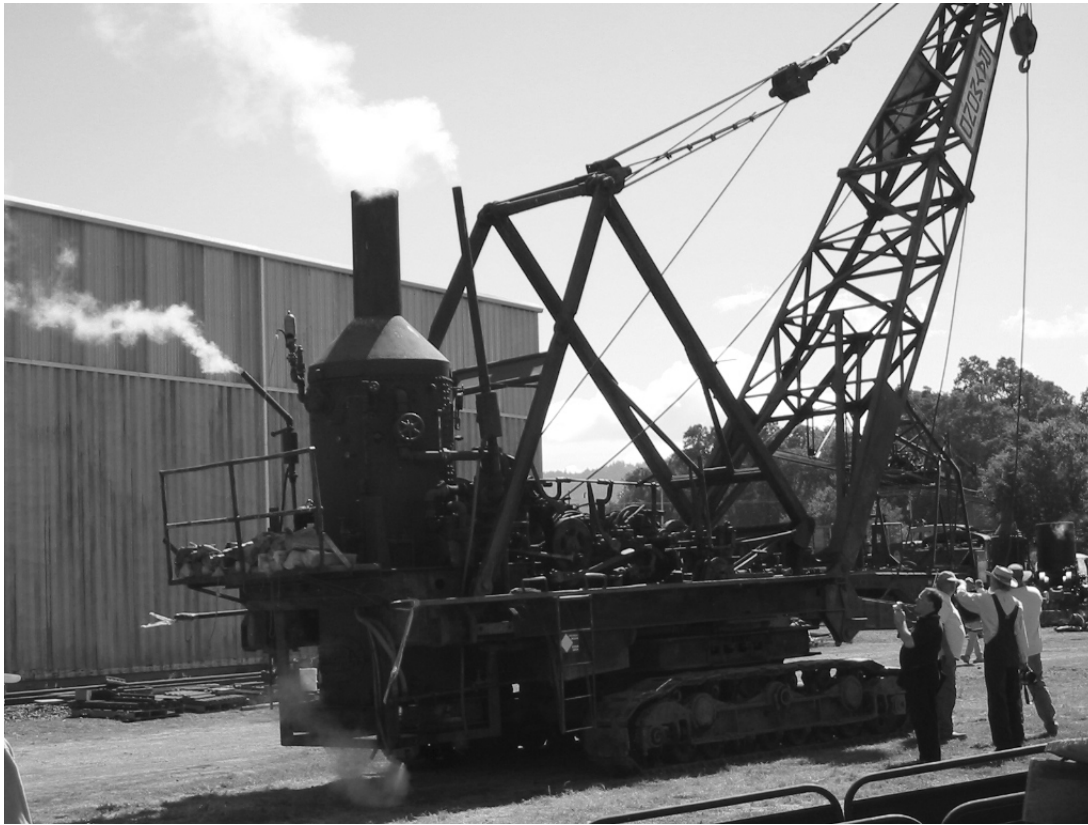
Also diesel powered, were two early Cat's, a 20 Cat and a 30 Cat. (More officially, a Caterpillar Tractor Model 20 and Model 30 re-

spectively.) Pictured is the 20 Cat (I think, I'm sure a Chapter member or friend will correct me...). In these pre-OSHA machines, almost everything moving is exposed. No wonder that logging was one of the most dangerous occupations.

Another favorite was a steam shovel. We even got to see this behemoth move under its own power!



20 Cat



Steam Shovel. Tony Meadow taking a picture and Andy Fahrenwald chatting with two other Chapter Members

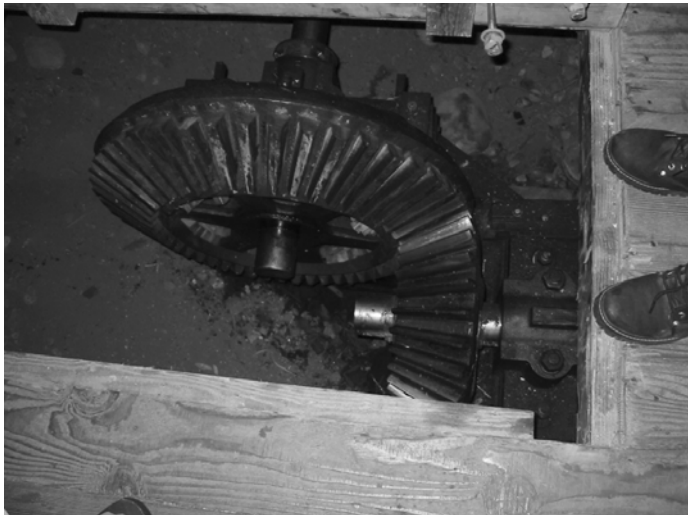
It's not too early to begin planning a trip to the Festival next year!
It's tentatively scheduled for September 9 & 10, 2006. *JM*



Chapter Members Noel Kirshenbaum, Chuck Quibell and John de Marchi

Chapter Event: Bale Mill Visit, May 7, 2005

A group of Chapter Members met at the Bale Grist Mill State Historic Park on May 7, 2005. We were fortunate in having some detailed notes on the mill by millwright John Brown, who has participated in the mill's restoration at several times. As things turned out, we were a few weeks early in visiting, as the current restoration effort was scheduled for completion in Summer 2005. The mill had been damaged and has not been operational for several years.



Bale Grist Mill Gears – Metal on Metal and Wood on Wood

Dr. E.T. Bale was awarded a large land grant in today's Napa County by General Mariano Vallejo in June 1841, in part for his services as the Surgeon-in-Chief for the Mexican Army in Northern California. Bale had arrived from his native England in 1837 as one of a few survivors of the wreck of the ship *Harriet* off the Monterey Coast.

Bale married Vallejo's niece, Maria. He established a saw mill and a grist mill. In the 1850's, the grist mill was replaced with a mill of the current design.

Bale left the Napa valley in 1848, lured, like thousands of others, by the discovery of gold in the Sierra Foothills. He contracted a fever there, from which he never fully recovered, and he died in 1849. One of his daughters, Caroline, and her husband Charles Krug, received part of the Bale land, and are credited with introducing viticulture to the Napa Valley.

A 36 ft. overshot wheel with an unusual external gear system, drives the gears of the mill which in turn, drive the two grinding stones, and shafts and belts for the systems for moving grain and handling the stones and other heavy equipment. The current gear train is a mixture of wood on wood and metal on metal gears. The original gear train was all wood on wood. Mr. Brown's notes on the gear train show the necessity for precision in the alignment of the gears and the skills necessary to be a successful millwright.



Overshot Wheel at Bale Mill. Note the main drive gear inside the ring of buckets.

Our visit started quietly, we had plenty of time to explore the mill and the surrounding area before a large group arrived. One of the attractions for me about 19th century technology is that one can reason how even a fairly complex system like the mill actually works. It was straightforward to follow the flow of power from the water wheel through the gear train to the stones. The line shafts and belts are also very familiar territory, virtually every industrial site of the era utilized similar systems. There were a few things that the group needed the “collective mind” (e.g. several of us trying to understand how the heck something worked), which was a lot fun. Although the turnout was modest, we all had a good time, and learned at least a few new things about one of the oldest industrial sites in the Bay Area. I’m definitely planning another trip up to Napa to see the mill in operation! *JM*

Notes and Tidbits

2005 SIA Annual Conference

This year's Annual Conference was held in Milwaukee, WI. The SIA Newsletter covers the conference in more detail, but I wanted to share some activities outside the conference.

I came in a day and a half early to enjoy some of the city that wouldn't be covered in the SIA events. One of the most spectacular sights is the new, Santiago Calatrava designed, extension to the Art Museum. Resembling a bird in flight, it is a stunning addition to the Museum, and has been acclaimed throughout the architecture community.



Quadracci Pavilion designed by Santiago Calatrava

But, if you're going to visit Milwaukee with an IA bent, there are two mandatory stops: Harley-Davidson and a brewery!

Harley-Davidson

Harley-Davidson offers tours of one of their engine assembly factories. The tour and the overall experience were EXCELLENT! The factory is located on the West side of Milwaukee in an area with many other active industrial sites. The tour begins with a video outlining the long history of the company and the dramatic ups and downs it has experienced. Every SIA member would enjoy the factory tour. There are several hundred precision parts that go into a Harley-Davidson engine. Although there was a lot of automated material handling, people, not robots, put these engines together. The timing of the tour was just a bit off to see the last little bit, where each engine is fired up for the first time. (When we got to that point, the line had been shut down for a break. DRAT!) Alas, photography was not permitted, so you'll just have to visit this wonderful place yourselves!

Miller Brewery

The week before leaving for Milwaukee, I'd gotten to go on a tour of the Gordon Biersch brewery in San Jose, a small "craft" brewery. (I'll try to organize a Chapter tour at some point, they are only offered on Friday afternoon, when the plant is shut down.) Scale that up by a thousand times and that's Miller. Basic processes are all the same, but massively larger. This is a site with a long history, but now is an ultra modern, highly efficient production system. Another "must see" for any Milwaukee visitor. It is the last remaining major brewery in Milwaukee.

The tour started with the bottling line, a mind-boggling rush of cans and bottles. We crossed the street to the brew house, and climbed several flights of stairs to be above the brewing cauldrons. Through their openings, one could see the boiling liquid that eventually would become Miller beer. We ended in a pub partly housed in caves excavated to "lager" the beer in the days before mechanical refrigeration. A few samples, and a bit more corporate messaging, and this great tour was over. *JM*

2005 SIA Fall Tour

Approximately 160 SIA members and friends attended the Fall Tour focusing on the automotive industry in and around Detroit.

The early-bird tour on Thursday was to a little known aspect of Ford Motor Company, the Village Industries. Henry Ford was concerned that his large plants, first Highland Park, then the Rouge, were drawing workers away from their rural homes. He created a large number of small plants, many along the Rouge River that allowed workers to continue farming, working close to home. Each plant had a specialty, for example one of them made all the employee badges. Although Ford's experiment ended after World War II, many of these plants still house small industries.



Nankin Mills Ford Plant, now the interpretive center for the Village Industries

The opening reception was in the historic Ford Paquette Avenue Plant, the first building owned by the Ford Motor Company. The Model T was designed at the plant and the first couple thousand were built there, before Ford opened the Highland Park Plant.

Friday began with a special version of the new Rouge Tour. Some of the SIA purists found this to be overly glitzy, but most of us felt it was an exceptionally well-done portrayal of the past, present and future of “the Rouge”. Our group continued on to visit two stamping plants. Thyssen-Krupp is housed in the former Independence Motor Company on Detroit’s East Side. The offices are in a replica of Independence Hall. Inside is a modern, automated stamping plant. Later, we visited New Center Stamping Inc., housed in a 1930’s era Fisher Body building (with some of the machinery dating back that far). This was what stamping plants looked like before automation. No tower lights here, a worker had to run over and get a supervisor when a machine needed to be reset! We ended the day with a visit to “the BobLo boat”, a 1910 steamer that carried visitors to an amusement park on BobLo Island up through the 1970’s. The boat was decked out to be a Halloween Haunted House by its current owner.

A highlight of the Tour was a narrated boat ride on Saturday morning down the Detroit River, including visiting the ore and coal docks at the Rouge. The trip up the Rouge River passed under six draw-bridges, each different (though most were bascules). We also saw several lake freighters, including one backing out from Zug Island. Although much has changed, as evidenced by the abandoned 12-story Michigan Central Tower, there is still a wealth of industry along the

river. The blast furnaces at Zug Island are still in operation, the waste gas flare could be seen from our hotel. The Marathon oil refinery is undergoing a major expansion, cranes were in position to raise some new unit. Salt is still being mined from beneath the area. This salt was part of the roots of the chemical industry in the area. The afternoon featured a tour of the East Side, including stopping at the former Packard Plant. We ended up at the Detroit Institute of Arts to view the magnificent Diego Rivera murals celebrating local industry.



Lake freighter American Spirit leaving Zug Island after unloading iron ore.

The Saturday banquet was held at the Dossin Museum on Belle Isle, which is dedicated to the history of Great Lakes shipping. There were two different tours on Sunday morning. One took us to the Milwaukee Junction area, the initial center of automotive activity, though now, largely just abandoned buildings. The other was a walking tour of some of the buildings in downtown. Detroit experienced a massive boom in the early 20th century, and many of the buildings are still standing. A personal favorite was the Guardian Building with its wonderful art deco interior. One also has to visit the Fisher Building, done by Albert Kahn with a “spare no expense” budget from the Fisher brothers.

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Address Correction Requested

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Membership in the Samuel Knight Chapter is available in the following categories:

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| Individual | \$25 | |
| Couple | \$30 | One copy of newsletter |
| Student | \$10 | Please send copy of current ID |
| Senior | \$10 | Age 65 or older |
| Contributing | \$60 | |
| Institutional | \$30 | |
| Sustaining | \$125 | |
| Corporate | \$100 | Includes 4 memberships - please list names |

To join the Chapter, please send a check or money order (made out to the Samuel Knight Chapter) to the Chapter Treasurer. We'd also love to know about your interests, skills, etc. that might be part of a future Chapter event. We encourage Chapter members to join the National SIA.