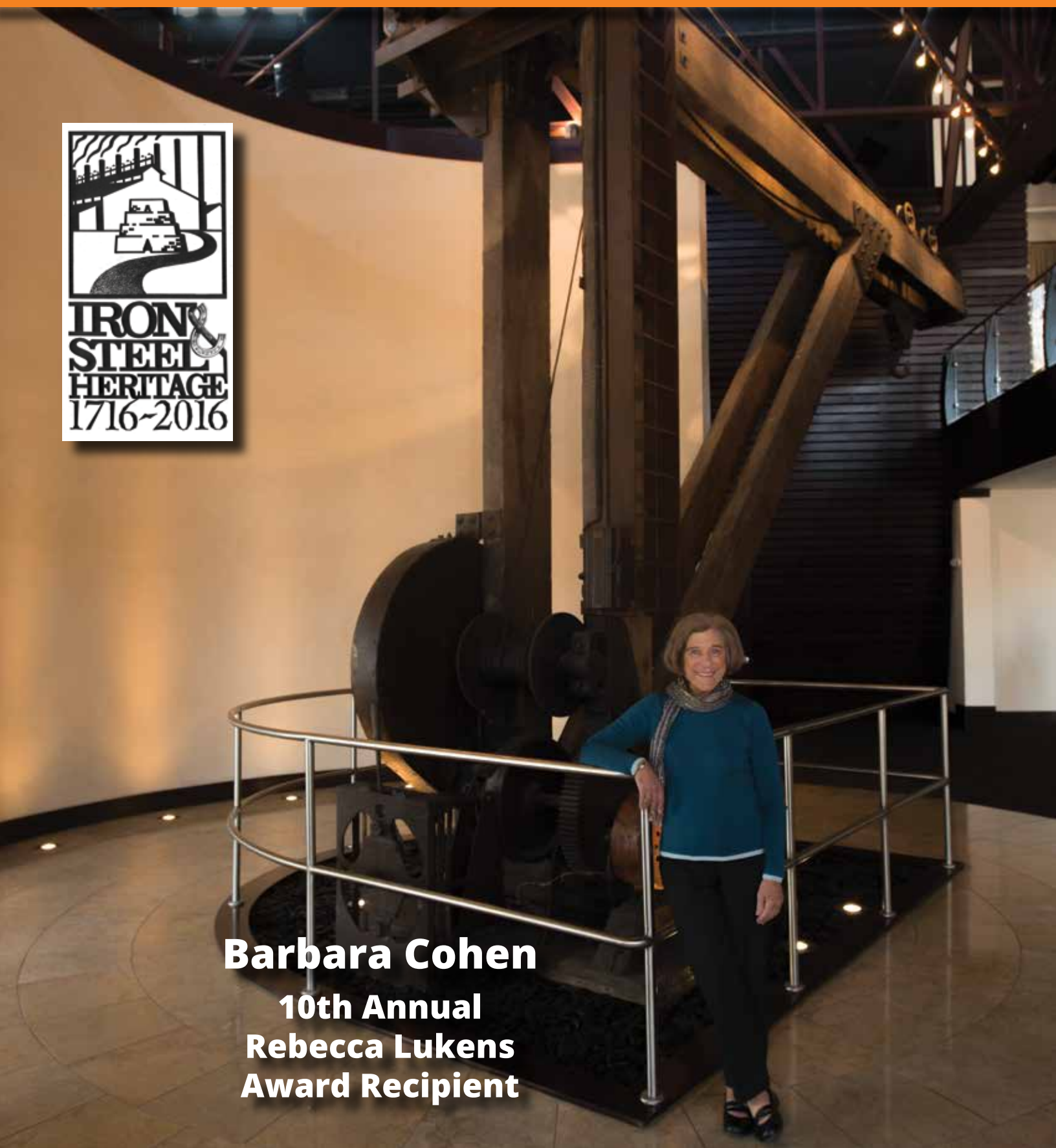




Barbara Cohen
10th Annual
Rebecca Lukens
Award Recipient



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Our Mission

The National Iron & Steel Heritage Museum is a not-for-profit educational institution whose mission is to promote an understanding of the iron and steel history of Coatesville, Chester County, Southeastern Pennsylvania and the region to audiences of all ages and interests by collecting, preserving, exhibiting and interpreting iron and steel's history and its relationship to the region and nation beyond.

Front Cover:
Noted Renaissance
Woman, Barbara
Cohen of Valley Forge
is the recipient of the
10th Annual Rebecca
Lukens Award.
Photo by: Robert Williams

PRESIDENT'S MESSAGE

The past few months have been ones to remember for the National Iron & Steel Heritage Museum. From monthly lectures, to the restoration of some of our properties, to planning for future events and happenings, our museum has been a busy place!

This year's lectures included a Rebecca Lukens Birthday Celebration, a Black History Month lecture about the role of African Americans in Coatesville's history, a Women's History Month lecture about historical markers for influential women in Pennsylvania, and an April presentation about shipbuilding. We will host lectures later in the year, so keep an eye out for future topics!

Restoration and preservation are an important part of NISHM's mission. Often properties are neglected, and this can lead to the sale or demolition of an important building. NISHM is preventing this

from happening to our amazing collection of historical buildings, which represent a wide array of architectural eras. This year's projects have included: a makeover of the interior and exterior of the Tenant House (1880s), the restoration of Graystone Mansion's (1889) floors, and stabilizing the foundation of Brandywine Mansion's mid-1700s structure. Please read more about these projects in this issue of Boilerplate.

I am also pleased to announce that NISHM is continuing with rotating exhibits. This summer brings "Coatesville Rolls into World War I," a fascinating look at the impact Coatesville and the United States had on World War I, which greatly changed the world.

As always, I thank you for your support and look forward to seeing you soon!



Scott G. Huston



Jim Ziegler

EXECUTIVE DIRECTOR'S REPORT

The National Iron & Steel Heritage Museum has been adding depth to its programming in recent years, including displays and exhibits of Lukens' products and the equipment used to produce them. In the following articles we will share an overview of those programs through our lectures, trips and exhibits. We share stories of iron and steel and, hopefully, inspire you to discover more about the people, process and products made in Coatesville and beyond.

Commemoration is one of the great ways to engage the public and offer us opportunities to involve the community. Through the Rebecca Lukens Award we honor both Rebecca Lukens and a woman of today who exhibits the character of Rebecca. The 2016 Rebecca Lukens Award Recipient is Barbara Cohen, who possesses those qualities of leadership, resilience, courage and strategic outlook that Rebecca Lukens displayed.

We thank you for your membership and support! Please feel free to share your thoughts and ideas with us.

The National Iron & Steel Heritage Museum is a project of the Graystone Society, a 501(c)3 public charity registered with the Pennsylvania Bureau of Charitable Organizations. Contributions are tax deductible to the extent permitted by law.



Photo by: Robert Williams

BARBARA COHEN - 10TH REBECCA LUKENS AWARD RECIPIENT

The National Iron & Steel Heritage Museum along with Citadel Federal Credit Union, is pleased to announce its tenth annual Rebecca Lukens Award to be presented to noted Renaissance Woman, Barbara Cohen of Valley Forge. Established by the Graystone Society's National Iron & Steel Heritage Museum to honor individuals who exhibit the qualities of Rebecca Lukens, the annual award will be presented to Ms. Cohen at a May 4th reception at the Lukens Executive Office Building, in the Lukens National Historic District.

A native of Philadelphia, and class valedictorian of her class at Northeast High School in 1959, this great lady went on to truly change the face of a community. Not only has she been a dedicated township supervisor, but she has also been extremely active in civic organizations that literally

transformed the face of Phoenixville. Ms. Cohen credits her parents for her community activism, "My parents were both committed participants and leaders in our synagogue and other non-profit, charitable organizations. I believe that this fostered in me the idea that giving back to the community is a positive and important aspect of life.

She feels that Rebecca Lukens also exemplified this same dedication to community, family and history. "I am very honored and humbled to be the recipient of the Rebecca Lukens Award this year. She was an amazing woman, especially given the time frame in which she lived and worked. Her inspirational story gives me the courage and inner strength to continue my quest to make history come alive and be aesthetically appreciated by all!"



REBECCA LUKENS AWARD

The Rebecca Lukens Award ceremony and reception will take place May 4 from 5:30 to 8:00pm.

The evening will include delicious passed hors d'oeuvres, an open bar, and will also serve as the premiere for our spring exhibit, "Coatesville Rolls into World War I."

Rebecca Lukens Award Recipients

- | | |
|----------------------------|----------------------------|
| 2007 - Mary Sullivan | 2008 - Jane Davidson |
| 2009 - Barbara Travaglini | 2010 - Gladys Flamer |
| 2011 - Nancy Hannum | 2012 - Tammy Cansler Miles |
| 2013 - Regina Horton Lewis | 2014 - Molly Morrison |
| 2015 - Mary Ann Rossi | |

Clockwise from upper left: Mary Ann Rossi, Molly Morrison with Chester County Commissioner Terence Farrell and Graystone Society President Scott Huston, Mary Sullivan with Barbara Travaglini, State Representative Harry Lewis and his wife Regina Horton Lewis, Gladys Flamer and Rebecca Lukens (as portrayed by Susannah Brody), Tammy Cansler Miles with Carol Davidson (daughter of Nancy Hannum) and Barbara Travaglini, Eugene DiOrio, Jane Davidson and Scott Huston.



Photos by: Robert Williams & Samuel Radziviluk



BRANDYWINE MANSION RESTORATION UPDATE

Brandywine Mansion dates to the mid-1700s, and in 1788 Moses Coates added a larger west section. Rebecca Lukens lived in this house until her death in 1854. Much later, Brandywine Mansion became part of the Lukens' Company Store. Currently the building is under construction with restorations that will allow the interpretation of the home Rebecca lived in.

In 2015, restoration began with roof and cornice work done to the 1788 addition. This year we are stabilizing the structural masonry of the building. 18th Century Restorations, Inc. and Frens and Frens Architects are the principals involved.





GENE DIOTRIO LOANS SS UNITED STATES MEMORABILIA

Complementing our exhibit on ships and shipbuilding, and recognizing the renewed interest in the SS United States, as serious proposals are being made for its restoration as an operating passenger liner, Gene drew upon his personal collection of shipping memorabilia for items relating to this uniquely famous liner. The SS United States is of particular local interest, as Lukens provided steel used in its construction at the Newport News Shipbuilding and Dry Dock Company in Newport News, Virginia.

Entering the Trans-Atlantic service in 1952 as the flagship of the United States Lines,

the ship achieved fame and distinction as the largest passenger liner ever built in the United States. With its record-breaking first crossing bettering previous times in both east and west directions by substantial margins, she won the prestigious Blue Riband of the Atlantic from Cunard's long time holder the RMS Queen Mary. The ship's splendid achievements were a source of pride and satisfaction for America and its engineering capabilities.

Gene's collection includes scrap books in which he preserved news coverage of the ship's construction and first Atlantic crossings, deck plans, and photos of the ship at sea. Also presented are

souvenir items from his 1966 crossing from Southampton, England to New York. Displayed are several samples of menu cards from the ship's Main Dining Room, featuring steel engravings of important landmarks in Europe and America. Samples of stationery, a passenger listing, cocktail stirrers with miniature eagles, and a small model of the ship itself are also included.

Hopefully, this small exhibit will be a reminder of the importance of American Maritime History, and of this great liner - it still holds the record as the world's fastest - and the keen possibility of the ship's renewed career as a symbol of America's power and prestige.



EXHIBITS, LECTURES & TRIPS

"U.S. Shipbuilding in the Age of Iron and Steel" focuses on the process of shipbuilding and the role Lukens Steel played in shipbuilding technology in the United States. Since 1825, Lukens has played a crucial role in ship innovations, including providing iron boiler plate for the boiler, hull and ribs for the first iron-hulled steamship built in America, the Codorus. Throughout the 1900s Lukens supplied steel for ships that greatly impacted U.S. history, including the world's first nuclear submarine, the Nautilus. The Coatesville site continues to manufacture steel for important marine vessels.

We visited the Battleship

New Jersey, City Tavern and the Independence Seaport Museum on Thursday, April 21st. The New Jersey was America's most decorated Battleship and is now an exciting museum. From the New Jersey we stopped for lunch at the historical City Tavern Restaurant in Old City Philadelphia, the location of the first Fourth of July celebration in 1777 and George Washington's Pre-Inaugural Ball. We spent the afternoon at the Independence Seaport Museum for a guided tour of the historic ships – the Cruiser Olympia and Submarine Becuna.

We hope you'll look forward to our next trip in the fall.

Clockwise from upper left: Martha Skiadas and Jean Grace at the U.S. Naval Academy museum during our October 2015 bus trip. Thomas Heinrich at the "Ships For The Seven Seas" lecture in October. The "Nautilus" under construction. The SS Rebecca Lukens was a World War II Liberty Ship.



SHARON TANDARICH

Sharon Tandarich was hired at Lukens Steel Company on April 13, 1962 as a Stenographer in the Coatesville District Sales Office for Chuck Rea and Albert Sardella. In 1964, she began working for Al Eastburn in Industrial Engineering as a Secretary. As part of Management Services she spent time at Welded Products #1, the Conshohocken plant, and the ARC Building.

She came to the Historic District in 2002 and currently is the Buildings Systems Manager, responsible for construction, repair, preventive maintenance and safety and security programs for Lukens National Historic District buildings.

Sharon says, "I came back to a building I always admired and got acquainted with several new buildings, including Graystone Mansion, Terracina, and Brandywine Mansion. It's a pleasure to be a part of maintaining the historic buildings and grounds."



MELINDA WILLIAMS

Melinda Williams has been a part of The National Iron & Steel Heritage Museum since its inception. She came on board with the company she manages, The Williams Group, as a specialist in Public Relations.

Williams' idea generation helped to spark the first Rebecca Lukens Award, which has since become a fixture in the museum's event programming. She was also credited with organizing the publicity for "Coming Home To Coatesville" in 2010 (the "homecoming" of World Trade Center steel to Coatesville, the place of its birth).

Her background in sales (as a veteran of The Philadelphia Inquirer's advertising/marketing team for 18 years) was noted and she was tapped to head the museum's development efforts. Melinda relishes her position as Development Manager, as it gives her a chance to meet museum donors and members first hand.



"COATESVILLE ROLLS INTO WORLD WAR I" EXHIBIT TO OPEN

"Coatesville Rolls into World War I" will portray the United States' and the City of Coatesville's support of and involvement in the Great War (1914-1919).

World War I, first known as the Great War, began with the assassination of the Archduke Franz Ferdinand on June 28, 1914, and officially ended on June 28, 1919 with the Treaty of Paris. As a total war, the Great War required full mobilization of the participating nations.

Almost every aspect of life in the United States was mobilized to support its participation: economic production increased, women entered the workforce, and citizens purchased bonds to pay for the war.

Even small locations, like Coatesville, did everything in their power to ensure American and Allied victory. This exhibit will tell the history of Coatesville's (and the United States') involvement in and support of World War I.

Themes will include America's home front, the

Clockwise: "Our Answer to the Kaiser" – Thousands of Americans were ready to fight for their country.

Identification Book for James Stewart Huston (descendant of Rebecca Lukens), who served as an ambulance driver in France.

Soldiers resting in France.

Tanks were first used in war in 1916. These "land ironclads" weighed tons and traveled on caterpillar tractors.

use of iron and steel in the war, the actions of Coatesville's steel companies, the support of the city's citizens, and the draft and the men from Coatesville who served. Uniforms and other related artifacts and documents will be on display. Visitors will see Coatesville's impact on a war that forever changed the world.

"Coatesville Rolls into World War I" opens on Wednesday, May 4 and will remain on display through August. The exhibit is included with the cost of museum admission and tours. And remember, members receive free admission to the museum.

300 YEARS OF IRON & STEELMAKING IN PA ANNIVERSARY

The first iron forge in Pennsylvania was started in 1716 by Thomas Rutter on the banks of the Manatawny Creek in Douglass Township. In 1717, Coventry Forge was established at Coventryville, Chester County. These were the forerunners of the many Pennsylvania forges and furnaces which were so vital to American independence and industrial development.

The Iron and Steel Heritage Partnership, led by the National Iron and Steel Heritage Museum, is a group of more than a dozen government agencies,



private non-profits, and municipal entities celebrating 300 Years of Pennsylvania's Iron and Steel Industry. Its mission is to foster a better understanding of Pennsylvania's contribution to iron and steel making in America through heritage tourism. Events and tours of the participating sites will celebrate the remarkable 300-year history of iron and steel making in Pennsylvania. For more information and a calendar of upcoming

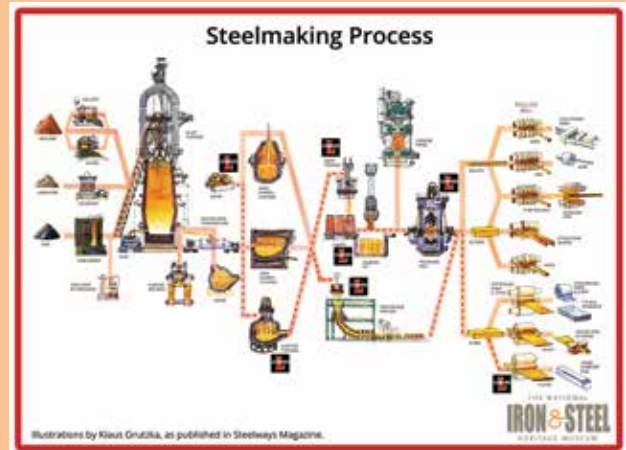
events visit the partnership web site at www.ironandsteelheritage.org.

"HOW STEEL IS MADE" EXHIBIT COMING SOON

"How Steel is Made", a new permanent exhibit explaining the steelmaking process, will be put on display in the next few weeks.

Making steel begins with mining iron ore and processing that ore in a blast furnace. After that point there are several different processes and ways that can be used to make the steel that will be finished and shaped into useful products.

Visit us to learn in more detail about these different processes in "How Steel is Made".



How Steel Is Made

Mining Iron

Before all else, iron ore must be mined from the earth. Most of the world's iron ore comes from open-pit mines.

Open-Pit Mining: Bulldozers and other equipment remove the soil and rocks that cover the iron ore deposit and then explosives break up the mass of ore.

Once mined, the iron ore must be processed: it is broken down, separated from sand and rock, and washed. The processed iron ore is then converted into molten (liquid) iron, which is used to make metal products.

Illustrations by Klaus Grutka, as published in Steelways Magazine.

Electric Furnace Process

An **electric arc furnace** is a shallow steel cylinder lined with refractory and it has three **electrodes** (carbon rods) which are inserted through the furnace roof. The charge is mostly scrap steel and alloy materials.

Steel is produced in an electric arc furnace by the following steps:

1. The charge is put into the furnace.
2. A powerful electric current arcs (jumps) between the electrodes, producing intense heat.
3. The charge melts and chemical reactions produce steel.
4. Alloying materials are added.
5. The furnace is tipped to pour out the molten steel.

Most steel today is manufactured in electric furnaces, which are less costly to build and are more efficient than the basic oxygen or open hearth furnaces.

Illustrations by Klaus Grutka, as published in Steelways Magazine.

Open Hearth Process

An **open hearth furnace** has a lining of refractory and a low, arched roof that covers the hearth, which is open directly to flames that melt the charge. This process uses about equal amounts of iron and scrap.

Steel is produced in an open hearth furnace by the following steps:

1. A machine dumps limestone and scrap steel (the charge) into the furnace.
2. After the charge melts, molten iron is added.
3. Heating continues. Carbon from the iron becomes carbon monoxide gas. Impurities are separated and form slag.
4. The remaining product is molten steel, which flows into a large ladle where alloying materials may be added.

This process uses expensive fuel oil and makes steel slowly. It was largely phased out by the 1980s and makes only a small percentage of steel today.

Illustrations by Klaus Grutka, as published in Steelways Magazine.



MOTHER'S DAY TEA - SUNDAY, MAY 8TH

In honor of Mother's Day, join us for a tea at Graystone Mansion, from 1:00 to 3:00pm. The historic grounds of the Lukens National Historic District will make a lovely spring backdrop with trees and flowers in bloom. Tea, tea sandwiches, scones, and pastries will be served on traditional china.

To reserve your spot, please R.S.V.P. to marketing@steelmuseum.org or phone 610-384-9282. Tickets will also be available at the door the day of the event.





GRAYSTONE MANSION

Graystone Mansion's (circa 1889) hardwood floors have been restored and look like new. The original 2-inch thick white-oak floors of the entrance and Great Hall, library, music and dining rooms were cleaned and sealed in January 2016. A.F. Huston built Graystone in 1889 and lived there until his death in 1930. Sold to the City of Coatesville in 1938, Graystone served as City Hall until 1992.

TENANT HOUSE

The Tenant House (circa 1880) had an interior and exterior makeover in the last 12 months. Located between Terracina and the 120" Mill, the building is typical of housing for steel workers in that era. This house was erected next to a barn and it was later occupied by the chauffeur/butler of Stewart and Harriet Huston. It has now been completely restored.



SPRING

Spring Bus Trip: Independence Seaport Museum & Battleship New Jersey
April 21 | 8am to 6pm

Volunteer Day: Hanging the "Coatesville Rolls Into World War I" Exhibit
April 30 | 10am to 3pm | Free Event | Lunch Provided

Rebecca Lukens Award, Charles Lukens Huston Scholarship Presentations,
& "Coatesville Rolls Into World War I" Exhibit Premiere
May 4 | 5:30pm to 8:00pm | \$60 Admission

Mothers' Day Tea
May 8 | 2pm

Lecture: World War I - Featuring Bob Ford
May 19 | 6pm - 8pm | \$5 Admission, Members Free

SUMMER

Town Tours and Village Walks
July 7 | 5:30pm to 7pm | Free Event

FALL

Coatesville Remembers 9/11 Commemoration
September 11 | Free Event

Steelworker's Reunion Barbecue
October 1 | Noon to 4pm

Fall Bus Trip - Bethlehem Steelworkers' Tour, Bethlehem, PA
October 6 | 8am to 6pm

Holiday Open House: Santa, Trains & Music
December 9 | 5pm to 8pm | Free Event

Brunch With Santa
December 10 | 10am to 1pm

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LUKENS ALUMNI CELEBRATION

LOOKING BACK: LUKENS THROUGH THE YEARS

**WEDNESDAY, JUNE 1ST, 2016
12PM-2PM**

James Ziegler, Executive Director of the National Iron and Steel Heritage Museum will present *Looking Back: Lukens through the Years* to honor all in attendance. A Chef inspired lunch will be provided courtesy of our sponsors Freedom Village. Alumni are encouraged to bring a guest.

RSVP to Carrie at 484-288-2200 by May 24th



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THANK YOU TO ALL OF OUR MEMBERS
WHO JOINED OR RENEWED FROM
OCTOBER 1, 2015 TO MARCH 2, 2016

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Peter & Phyllis Patukas

Marguerite Martin
Nancy Kirchgasser

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Norman Bernard
Martha Boyd
Alex Cann, Jr.
Ross Davis
Joseph & Lindsay DuBarry
Kermit & Gwendoline Good
Maurice & Judith Hare
Carol Holloway
James Kauffman
Dale & Nanette Krapf
Bob & Jennifer McNeil
Richard Pennock
Ami Trost
Kenneth Wyerman

Charlotte Asherman
Felicitas Bowie
Lindsay Brinton
Ted & Dolly Corbo
Greg DePedro
Robert & Patricia Edge
John Graves
Mary Holleran & David Proctor
Barbara Huston
Peggy & Ken Kistler
Harry Krieder
Kevin & Becky Mountain
Matthew Skros
Donald Van Horn
Frank Yannetti

Irma Bailey
Sharon Bowyer
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Robert Coulter
Earl & Eliza Dering
Martha Edwards
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Kevin & Priscilla Holleran
Charles L. Huston III
Janet & Lew Klein
Edward Lawrence
Durand O'Meara
Rose Terriman
Gertrude Wendt

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(5+ CONSECUTIVE YEARS)

Norman & Roxalyn Alexander
Sharon Bowyer
Joseph & Lindsay DuBarry
Carol Holloway
Janet & Lew Klein
Bob & Jennifer McNeil
Rose Terriman

Irma Bailey
Susannah Brody
Robert & Patricia Edge
Barbara Huston
Dale & Nanette Krapf
Kevin & Becky Mountain
Gertrude Wendt

Felicitas Bowie
Greg DePedro
John Graves
Charles L. Huston III
Edward Lawrence
Durand O'Meara

SUPPORTING MEMBERS
(\$250 LEVEL AND ABOVE)

Durand O'Meara

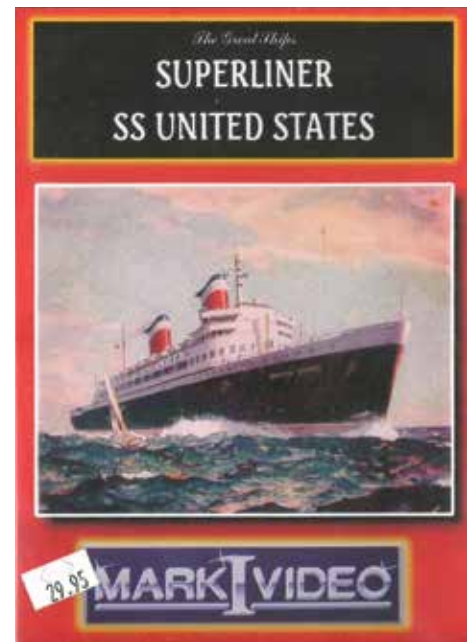
WE ARE GREATLY APPRECIATIVE OF ALL OF OUR
MEMBERS' SUPPORT!

WE COULDN'T DO IT WITHOUT YOU!

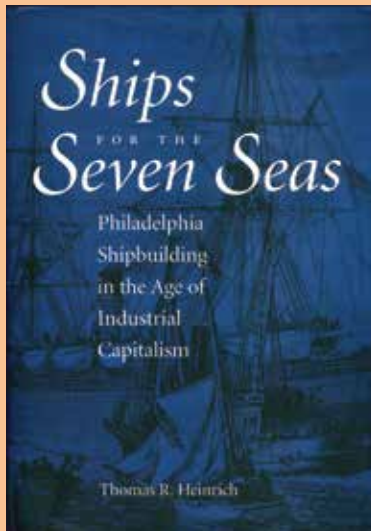
SUPERLINER SS UNITED STATES

This fine DVD presents the complete history of the superliner SS United States - the fastest ocean liner ever built - as depicted in a series of three classic black-and-white 16mm sound films. Opening with *Building New Superliner United States*, you'll see rare coverage of the construction of the huge liner. Come aboard for a complete tour in *Superliner United States ... At Your Service*. Concluding the program is *The Little Giants*, a behind-the-scenes look at how a fleet of Moran tugboats dock the ship in New York Harbor.

60 Minutes, \$29.95



SHIPS FOR THE SEVEN SEAS: BY THOMAS HEINRICH



Thomas R. Heinrich explores the complex shipbuilding industry from the workshops level to the vast subcontracting networks that spanned the Delaware Valley. He describes how entrepreneurial strategies and industrial change gave rise to major shipbuilding firms; how naval architecture, marine engineering, and crafts skills evolved as iron and steel overtook wood as the basic construction material; and how changes in domestic and international trade and the rise of the American steel navy helped generate vessel contracts for local builders.



\$24.99

REVELL U.S.S. LIONFISH WORLD WAR II SUBMARINE MODEL

This submarine proved to be the demise of virtually the entire Japanese merchant fleet during World War II in the Pacific. It was also effective in scouting the location and movement of the enemy ships and transporting raiding parties and coastal lookouts to Japanese held locales. This 1:180 scale model is recommended for ages 10 and up. It features a highly detailed hull, deck bridge and conning tower - twin propellers, fore and aft diving planes - One deck gun 30" 50 mm - Two 20 caliber guns - One anti-aircraft gun.



\$22.95

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