

Date

☐ See Attachments

## UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

# 4 OMB Approved No. 1024-0009 Form 10-168 Rev. 2011

# HISTORIC PRESERVATION CERTIFICATION APPLICATION PART 1 – EVALUATION OF SIGNIFICANCE

NPS Project Number Instructions: This page of the form must appear exactly as below and must bear the owner's original signature. Other sections may be expanded as needed or continued on blank pages. The National Park Service certification decision is based on the descriptions in this application form. In the event of any discrepancy between the application form and other, supplementary material submitted with it (such as architectural plans, drawings and specifications), the application form takes precedence. A copy of this form will be provided to the Internal Revenue Service. Property Name Aluminum Goods Manufacturing Co. (Mirro) Plant #3 Street 2402 Franklin Street Zip 54220 Manitowoc Manitowoc State Name of Historic District potential district certified state or local district National Register district Nature of request (check only one box) certification that the building contributes to the significance of the above-named historic district or National Register property for rehabilitation purposes. certification that the building contributes to the significance of the above-named historic district for a charitable contribution for conservation purposes. certification that the building does not contribute to the significance of the above-named district. preliminary determination for individual listing in the National Register. preliminary determination that a building located within a potential historic district contributes to the significance of the district. preliminary determination that a building outside the period or area of significance contributes to the significance of the district. Project contact (if different from Owner) Name Allen Johnson, MacRostie Historic Advisors LLC City Chicago 53 West Jackson Boulevard, Suite 1323 312.786.1700 x7016 State Owner I hereby attest that the information I have provided is, to the best of my knowledge, correct and that own the property described above. I understand that falsification of factual representations in this application is subject to criminal sanctions of up to \$10,000 in fines or inflation ment for up to five years pursuant to 18 USC 1001. Name Todd Hutchison Wisconsin Redevelopment, LLC Social Security OR Taxpayer ID Number City Milwaukee 3316 North Summit Avenue Street 414-791-4222 State Telephone NPS Official Use Only The National Park Service has reviewed the Historic Certification Application - Part 1 for the above-named property and has determined that the property: contributes to the significance of the above-named district (or National Register property) and is a "certified historic structure" for rehabilitation purposes. contributes to the significance of the above-named district and is a "certified historic structure" for a charitable contribution for conservation purposes. does not contribute to the significance of the above-named district. Preliminary Determinations: appears to meet the National Register Criteria for Evaluation and will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer according to the procedures set forth in 36 CFR Part 60. does not appear to meet the National Register Criteria for Evaluation and will likely not be listed in the National Register. appears to contribute to the significance of a potential historic district, which will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer. appears to contribute to the significance of a registered historic district but is outside the period or area of significance as documented in the National Register nomination or district documentation on file with the NPS. does not appear to qualify as a certified historic structure.

National Park Service Authorized Signature

	NPS Project Number
operty address 2402 Franklin Street, Manitowoc, WI	
Description of physical appearance	
See attached continuation sheet.	
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ate of construction 1929	Source of date Company records, news articles
ate(s) of alteration(s) Post-1960s	Source of date
late(s) of alteration(s) Post-1960s	Source of date Company records, news articles  Source of date
ate(s) of alteration(s) Post-1960s as building been moved?   In no yes, specify date	Source of date
ate(s) of alteration(s) post-1960s as building been moved?   no yes, specify date   Statement of significance	Source of date
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### 5. Description of Physical Appearance

## Summary

Mirro Aluminum Company ("Mirro") Plant #3 is located at the northeast corner of Franklin Street and South 25<sup>th</sup> Street, just west of the center of downtown Manitowoc. The five-story building is roughly rectangular in plan with a timber and steel structure, brick exterior walls, and a flat roof. Two brick penthouses at the east and west end of the roof mark the location of the elevators and stairs. The main entrance to the building is located at the east end of the south elevation; a secondary entrance is located at the north end of the west elevation. The building is regularly fenestrated primarily with industrial steel sash windows in large rectangular openings. A number of window openings on the first and second stories are covered with non-historic corrugated panels. A one-story metal-clad storage facility, completed in the 1970s, is adjacent to the east side of the building. Mirro Plant #3 was designed by W. Fred Dolke, Jr. (1887-1975), a noted Chicago-based industrial architect. The building retains good architectural integrity, with no major additions or alterations. The building was owned and operated by the Mirro Aluminum Company (originally the Aluminum Goods Manufacturing Company) from its opening in 1929 through the early 2000s, when Mirro ceased operations in Manitowoc.

### Site and Setting

Mirro Plant #3 is located on the western edge of downtown Manitowoc, on a roughly rectangular lot bounded on the south by Franklin Street, on the east by 24<sup>th</sup> Street, on the west by 25<sup>th</sup> Street, and on the north by the Chicago & North Western Railroad. The area immediately surrounding the building is occupied primarily by single-family residences. Low commercial buildings are spread out along Franklin Street. West of the building on Franklin is a vacant lot, and east of the building is a one-story commercial structure. The building is built up to the lot line on all sides and is bordered by concrete sidewalks on the south, west, and east.

### Exterior

### South Elevation (Franklin Street)

The primary elevation of Mirro Plant #3 is the long south elevation fronting onto Franklin Street. This elevation is sixteen bays wide. Above the concrete water table, unornamented brick piers and slightly recessed brick spandrels laid in running bond form a regular grid of large rectangular window openings with concrete sills and brick headers. The main entrance is located two bays in from the southeast corner of the building. The brick surround is unornamented save for a rectangular stone plaque above, inscribed with "1929," the building's date of construction, set in a frame of rowlock brick. On the west end of the south elevation, two loading dock entrances (which show in historic photographs of the building) have been infilled with brick. The first story of the south elevation has thirteen window openings, all of which have been infilled or covered with non-historic corrugated panels. The seven easternmost openings also have smaller non-historic windows set within the corrugated panels. Above the first story, all of the south elevation window openings (one per bay per story) house original industrial steel sash windows.

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Metal scuppers are incorporated in alternating bays on the south elevation, to allow water from cleaning and other manufacturing processes to escape the building.

#### North Elevation

The north (rear) elevation, which follows the contour of the adjoining rail line, is similar in design to the south elevation. It is sixteen bays wide and regularly fenestrated, with slightly projecting masonry piers and brick spandrel panels framing large rectangular window openings. Most of the north elevation's original first story windows have been replaced with non-historic corrugated panels. One original loading entrance remains in use while two others have been infilled with brick and non-historic corrugated panels. Above the first story, the north elevation's large window openings retain their original steel sash windows.

### West Elevation

The building's west elevation facing 25<sup>th</sup> Street is five bays wide. Its south four bays are regularly fenestrated with large rectangular window openings between brick piers and spandrels. The northernmost bay is fenestrated with smaller window openings, three per floor, that open into the stair and elevator shaft. A brick-clad rooftop penthouse extends above the northernmost bay. A diminutive service entrance is located at the north end of the 25<sup>th</sup> Street elevation. All but three of the window openings on the west elevation retain their original steel sash windows. The brick spandrels between the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floors display ghost signing that reads "Aluminum Goods Mfg. Co." and "Plant 3."

#### East Elevation

The building's east elevation is five bays wide and unfenestrated, save for a single bay of small window openings in the second southernmost bay, denoting the east stair. These window openings retain their original steel sash windows. A brick penthouse rises seamlessly above this bay. North of the stair, the east wall steps back slightly. Projecting unornamented brick piers separate the bays.

The first story of the east elevation is obscured by the one-story metal-clad storage facility, which was constructed in the 1970s on the site of the former Manitowoc Plating Works.

#### Interior

Typical of early twentieth century industrial buildings, the interior of Mirro Plant #3 has primarily open, utilitarian spaces with no ornamentation. The main entrance opens into a small vestibule with stairs leading to the raised first floor. Non-historic partitions and doorways separate this vestibule from the rest of the floor. All five floors feature open plans with exposed structural system, wood flooring, and exposed masonry perimeter walls.

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## Integrity

Mirro Plant #3 retains good exterior and interior integrity, with no major additions or alterations. The building retains a majority of its original steel sash windows. Although the main entrance door has been replaced with a modern metal and glass door, the original entrance surround remains intact. The interiors display hallmarks of industrial buildings, with exposed structure and open, utilitarian spaces.

Overall, the building retains sufficient integrity of location, setting, design, materials, workmanship, feeling and association to convey its significance under National Register Criterion A in the areas of Industry and Recreation as one of the last buildings remaining of the massive Mirro complex that once dominated Manitowoc's industrial economy, and as the first production facility for the popular Mirro-Craft line of pleasure boats that Mirro unveiled in the post-war period.

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### 6. Statement of Significance

### Summary

Mirro Plant #3 in Manitowoc is one of the last buildings remaining from the massive industrial complex developed by the Manitowoc-based Aluminum Goods Manufacturing Company, later known as the Mirro Aluminum Company. The company, founded as an aluminum novelty business in the late 1890s, launched its flagship "Mirro" brand of cookware in 1917 and rapidly grew to become the largest manufacturer of aluminum cookware in the world. Mirro produced and sold millions of aluminum pots, pans, mixing bowls, coffee pots, and other kitchen utensils, which became commonplace fixtures in most American homes. In the post-World War II period, the company diversified its product lines and expanded its production into a wide variety of aluminum goods, ranging from building siding and storage sheds to aluminum saucer sleds and lightweight aluminum pleasure boats. The Mirro Company served as the cornerstone of Manitowoc's industrial economy and was the city's largest single employer through most of the twentieth century.

Mirro Plant #3 was designed by prominent Chicago-based industrial architect William Fred Dolke, Jr (1887-1975). The building originally served as a steel plating facility for Mirro cookware handles. In the post-World War II period, however, the building took on an important new role as a testing ground and production facility for the company's new line of lightweight aluminum pleasure boats known as "Mirro-Craft." Unveiled in 1958, Mirro-Craft was a key component of the Mirro Company's successful program of expansion and diversification in the post-war period.

By the late 1950s, Mirro was the state of Wisconsin's largest aluminum boat manufacturer, and by the early 1960s, the Mirro-Craft was the nation's second best-selling aluminum recreational boat and the best-selling aluminum pleasure boat manufactured in Wisconsin. Although production of Mirro-Craft was transferred to another facility in 1962, the years of initial design development, product testing and refinement, and marketing that occurred during the late 1950s and early 1960s at Mirro Plant #3 were key to the Mirro-Craft's enormous success in Wisconsin and throughout the country.

Mirro Plant #3 is locally significant under National Register Criterion A in the areas of Industry and Recreation as the first production facility for the Mirro Aluminum Company's popular "Mirro-Craft" line of lightweight and inexpensive family pleasure boats. The success of the Mirro-Craft line during the 1950s and 1960s heralded Manitowoc's and Mirro's post World War II economic growth and capitalized on the nation's growing enthusiasm for outdoor recreation and pleasure boating.

The period of significance for Mirro Plan #3 is 1958 to 1962, spanning the period during which the Mirro-Craft line was produced inside the building.

## History of Manitowoc and the Development of the Aluminum Goods Manufacturing Co.

First permanently settled by white lumbermen in 1836, the Manitowoc area steadily increased in population after an initial influx of New Yorkers, New Englanders, and German, Norwegian, and Irish immigrants beginning in 1847. Manitowoc's close proximity to the larger settlement of Two Rivers to its north along with its links to eastern markets via its natural harbor along Lake Michigan soon made it a destination for

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trade and industry. Named the Manitowoc County seat in 1853, Manitowoc was an early port of call for merchant steamers, transporting goods to and from other ports along the shores of the Great Lakes. A strong inland lumber industry fed Manitowoc's large riverside shipbuilding facilities which flourished throughout the nineteenth and early twentieth centuries, producing thousands of schooners and clippers, giving the city its moniker "Clipper City." Between 1850 and 1895, the city's population multiplied twelve-fold and as the Manitowoc County seat, Manitowoc served as both the area's commercial and political hub.<sup>1</sup>

Despite several attempts throughout the nineteenth century to connect the city by rail to the rest of Wisconsin, Manitowoc remained relatively closed to inland markets until the construction of a terminus of the Wisconsin Central Railroad in Manitowoc in 1895. The new railroad line connected the community to the industrial and port centers of Chicago, Duluth, and Minneapolis, and exponentially increased Manitowoc's industrial capacity. Shipbuilding increased with the establishment in 1902 of the Manitowoc Dry Dock Company (later the Manitowoc Shipbuilding Corporation) which built larger steel commercial vessels and later made World War II submarines for action. Manitowoc's crowded harbor also became the home of several large grain elevators and malting plants.<sup>2</sup>

In the 1890s, Manitowoc became the southern anchor for a Wisconsin aluminum manufacturing region that stretched thirty miles north along the shores of Lake Michigan to Kewaunee. Though far from the bauxite deposits that made aluminum production possible – in the late nineteenth and early twentieth centuries, American bauxite was mined almost exclusively in Arkansas – a small group of Wisconsin entrepreneurs established successful aluminum manufacturing businesses in Manitowoc and Two Rivers in the early 1890s, producing primarily inexpensive aluminum novelties like hair combs.

The Aluminum Goods Manufacturing Company was established in 1909 through the consolidation of three older aluminum concerns: the Manitowoc Aluminum Novelty Company of Manitowoc, the Aluminum Manufacturing Company of Two Rivers, and the New Jersey Aluminum Company of Newark, New Jersey. In its first two decades, the Aluminum Goods Manufacturing Company quickly became one of the Manitowoc's largest employers, buying up competitors and expanding its product lines to include aluminum utensils, cookware, automobile hub cabs for such large manufacturers as Dodge, Studebaker, and Buick, and military mess kits, cooking utensils, and canteens for the armed forces during World War I.

In the 1917, the company developed a wildly successful high-quality line of aluminum pots and pans called the "Mirro" line, which was sold directly to retailers. Prior to Mirro, the company had produced aluminum cookware and utensils for wholesale, syndicate, and mail order houses and for distributers such as Sunlight Aluminum Company, Great Northern Manufacturing Company, and The United Aluminum Corporation. The Mirro line was the company's first brand name cookware, and it was aggressively advertised with full pages ads in the Saturday Evening Post, Ladies Home Journal, McCall's and other national publications.<sup>3</sup>

By the 1920s, the company was the largest manufacturer of aluminum cookware in the world, giving Manitowoc the moniker of "Aluminum Center of the World." To accommodate its successful wholesale

<sup>&</sup>lt;sup>1</sup> Ralph G. Plumb, "Highlights of Manitowoc," The Wisconsin Magazine of History, Vol.31, No.4 (June 1948), 412-415.

<sup>&</sup>lt;sup>2</sup> "Highlights of Manitowoc," 415-416.

Wisconsin Historical Society, "Map of the state of Wisconsin showing the Wisconsin Central Railroad and its land grant, 1896." http://content.wisconsinhistory.org/cdm/singleitem/collection/maps/id/47/rec/1ted on: 12/12/2013.

<sup>&</sup>lt;sup>3</sup> "Sixty Years of Progress," Mixing Bowl, July 1955.

<sup>&</sup>lt;sup>4</sup> "City is known as aluminum center – world," <u>The Manitowoc Herald-News</u> (May 21, 1930), 6.

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aluminum cookware lines, Mirro constructed five large facilities after World War I, including a large new headquarters complex (Plant #2) in 1920 at 1512 Washington Street (expanded in 1929) and a large rolling mill in 1922, and the five-story Mirro Plant #3 in 1929 at 2402 Franklin. Additional Mirro production facilities were located in nearby Two Rivers.

With access to industrial aluminum severely limited during World War II, Mirro facilities including Plant #3 switched to the production of defense products such as airplane fuel tanks, engine, radar, and landing gear parts, and military cookware including coffee filters, meat platters, syrup pitchers, meat cans and cartridges, and canteens. In February 1941, the <a href="Chicago Daily Tribune">Chicago Daily Tribune</a> reported that Mirro had secured a \$368,000 government contract to produce utensils for the armed forces. Company advertisements during the war boasted that the Mirro plants in Manitowoc and Two Rivers were also "busily engaged in the manufacture of various parts for the giant [Boeing] Superfortress [aircraft], including propeller anti-icer tanks, oil shells, hopper tubes, engine deflectors and duct assemblies."

After the war, the company resumed production of its pre-war civilian products and again became the nation's largest manufacturer of aluminum cookware with innovative products like the popular Mirro-Matic Pressure Pan and the Mirro-Matic Electric Percolator, both of which sold in the millions.

In the 1950s, attracted by the purchase potential of the nation's growing middle class and looking to expand into new markets, Mirro executives and designers embarked on a long-range expansion program to double the company's output of aluminum and reach annual sales of \$100 million. In order to do this, the company developed over two hundred new products. An article in the December 2, 1959 edition of the Manitowoc Herald-Times reported that "Mirro will go into new fields with a high sales volume potential. These include aluminum siding and roofing for residential construction, aluminum foil for household use, disposable foil dishes, containers for bakeries and food packers, food wraps and laminates and expansions of gifts and toys." The company had already had great success with its new recreational products, most notably the Sno-Coaster, introduced in the 1957, and the Mirro-Craft pleasure boat, which debuted at the 1958 Chicago Boat Show and was first manufactured in Mirro Plant #3.

Mirro was purchased by the Illinois-based Newell Companies in 1983. By 2003, all Mirro company production operations were transferred out of Manitowoc and overseas. All of Mirro's original Manitowoc facilities are either demolished or vacant and slated for demolition.

### **History of Mirro Plant #3**

Mirro Plant #3, completed in 1929, is the only building that survives from the Mirro Company's period of rapid growth and expansion during the early decades of the twentieth century.

Mirro Plant #3 was constructed eight blocks west of the company's main plant (Plant #2) at 1512 Washington Street (completed in 1911 and expanded in 1920 and 1929). Mirro purchased the site of the future Plant #3 in 1928 along with the adjacent Manitowoc Plating Works (demolished in the 1970s) with the intent of creating an independent steel plating facility remote enough from Plant #2 to prevent the

<sup>&</sup>lt;sup>5</sup> "Millions Spent for Army-Navy Aluminum Ware." Chicago Daily Tribune, Feb. 26, 1941, 3.

<sup>&</sup>lt;sup>6</sup> Undated advertisement, on file at Manitowoc Historical Society.

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intermingling of the company's steel and aluminum industrial processes (contact between steel and aluminum in their raw states can initiate potentially destructive galvanic corrosion).

Plant #3 was designed by noted Chicago industrial architect William Fred Dolke, Jr (1887-1975), who also designed the large seven-story addition to Mirro's Plant #2 that was completed in 1929. Dolke received his training in architecture at the Massachusetts Institute of Technology and found his first career success as a designer for the engineering firm Lockwood, Greene & Co., which specialized in industrial designs for buildings across the country. Dolke joined the firm in 1915 and by 1921 had been promoted to chief engineer of the Chicago office. In 1917, he wrote an article on construction of industrial buildings that was featured in The American Architect. In 1928, he formed his own architecture firm in Chicago, focusing on industrial design. His commissions for Mirro Plant #3 and the expansion of Plant #2 were among his first commissions as a solo practitioner.<sup>7</sup>

In 1929, the new Plant #3 was placed into operation as a facility for the plating of steel cookware handles.<sup>8</sup> Mirro Plant #3 was the last Mirro production building built before the company's 1930s production slowdown. The building continued to be used for steel plating throughout the Great Depression, for defense product production during World War II, and for additional steel part production and metal stamping in the decade after the war.<sup>9</sup>

In 1958, Mirro Plant #3 became the first production facility for Mirro's new Mirro-Craft line, an inexpensive and lightweight 16-foot welded aluminum runabout pleasure boat intended for consumers joining the rising movement of American recreational boating. The debut of the Mirro-Craft was one of Mirro's highest profile successes of the late 1950s and was part of the company's expansion into more diverse ranges of non-cookware products. In the two years after the successful unveiling of the first Mirro-Craft, Mirro expanded its aluminum boat line with newer models including the Family Runabout, the Ski 'N' Troll, and the Camp 'N' Cruise, customized to meet the needs of different pleasure boat users and all produced in Mirro Plant #3. Already the nation's largest aluminum cookware manufacturer, in the late 1950s Mirro became the state of Wisconsin's largest aluminum boat manufacturer and the Mirro-Craft the nation's #2 bestselling aluminum recreational boat.<sup>10</sup>

The Mirro-Craft was manufactured within Mirro Plant #3 for four years until 1962 when production moved to a new facility. After 1962, the company used Mirro Plant #3 primarily as a warehouse and as leasable

Manufacturing Company (July 1955); online facsimile at

http://www.wisconsinhistory.org/turningpoints/search.asp?id=1207 Online facsimile

at: http://www.wisconsinhistory.org/turningpoints/search.asp?id=1207; Visited on: 12/11/2013

Phone interview with John Singer, former Mirro manager, December 10, 2013.

Phone interview with Robert Jagemann, building owner, December 10, 2013.

Sanborn Fire Insurance Map, 2402 Franklin Street, Manitowoc, Wisconsin. 1964.

<sup>9</sup> Phone interview with John Singer, December 10, 2013.

Phone interview with Robert Jagemann, building owner, December 10, 2013.

<sup>&</sup>lt;sup>7</sup> American Institute of Architects Archives, Questionnaire for Architects' Roster dated October 17, 1946.

<sup>8 &</sup>quot;Goods takes over plating works plant," Manitowoc Herald-News (August 17, 1928), 2.

<sup>&</sup>quot;Goods Co. gets plans on add to plating wks.," Manitowoc Herald-News (March 9, 1929), 2.

Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 1512 Washington St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 58811.

Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 2402 Franklin St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 57849.

<sup>&</sup>quot;Mixing Bowl 60th Anniversary edition, 1895-1955, and related Mirro Aluminum materials." Aluminum

<sup>&</sup>lt;sup>10</sup> Phone interview with Robert Jagemann, December 10, 2013.

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tenant space. In 1981, the building was sold to local candy and tobacco distributor Berkedal & Shimek. Mirro Plant #3 is currently vacant. In 1982, a group of employees purchased the Mirro-Craft line from Mirro. Today, Mirro-Craft is the only product line developed by the Mirro Aluminum Company that is still in production.

### The Mirro-Craft Runabout

The 1950s saw the Aluminum Goods Manufacturing Company's expansion into new markets in the search for new customers among America's growing working and middle class. Plans for a large new aluminum rolling mill for Manitowoc beginning in the mid-1950s spurred the company to develop new lines of non-cookware products to justify this enormous capital investment. In the late 1950s, the company initiated a transformation of its traditional image, beginning with the official change of the company name to "Mirro" after its successful cookware line. The company released a series of new products, "the key to new markets," it was reported, "geared to an expanding company operation." The company declared in the Manitowoc Herald-Times that "advanced planning and flexible programs designed to upgrade company research, production and distribution will help to build and maintain ready acceptance for Mirro products in the vast and diversified markets of the sixties." A new Mirro Builder Sales Department unveiled new Mirro-Plate aluminum siding and the Mirro portable utility house to exploit America's housing boom. Mirro-Foil and Mirro Jet-Stream cookware were developed to appeal to new American homemakers. Mirro also unveiled new lines of giftware, toys, snow shovels, and the Mirro Sno-Coaster.

The company's most successful and best-known new product of the late 1950s was "an important forward step to establish [Mirro's] long-range growth pattern." In January 1958, Mirro president W.F. Bugenhagen announced to the Manitowoc Herald-Times that "after studying the trend to family boating," the company would begin production of a new line of 16 foot aluminum pleasure boats called the "Mirro-Craft." Developed by naval architect and engineer David Beach (1918-2009) this new aluminum runabout line needed little maintenance, was light and sturdy, and designed to help Mirro enter the \$2.5 billion recreational boating market.<sup>15</sup>

The Mirro-Craft was unveiled to the public on February 7<sup>th</sup>, 1958 at the annual Chicago National Boat Show. The runabout was 16 feet long and 6 feet wide with a depth of 34 feet, and constructed of three separate aluminum components: a chine hull, keel, and rear transom large enough to accommodate a 70 horsepower outboard motor. Polystyrene foam was added beneath the boat's plywood floor to aid in floatation. The first Mirro-Craft boat's aluminum hull was left with a natural metallic finish; a Deluxe Mirro-Craft model offered in 1959 was painted with bold tones of red and white. The boat's lightweight aluminum frame weighed a mere 400 pounds, light enough to be carried by a few passengers using handles installed along the edge of

Phone interview with Robert Jagemann, December 10, 2013.

<sup>&</sup>lt;sup>11</sup> Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 2402 Franklin St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 57849.

<sup>12 &</sup>quot;Ad - New Products," Manitowoc Herald-Times (May 16, 1957), T-1.

Phone interviews with John Singer, December 10 and 13, 2013.

<sup>13 &</sup>quot;Ad – New Products," Manitowoc Herald-Times (May 16, 1957), T-1.

<sup>&</sup>lt;sup>14</sup> "Ad – New Products...," <u>Manitowoc Herald-Times</u> (May 16, 1957), T-1. <u>Mixing Bowl</u> (July-August 1959), 3.

<sup>15 &</sup>quot;Recreational Boating Has 37 Million Addicts," The Sheboygan Press (April 10, 1963), 23.

<sup>&</sup>quot;Mirro Prepares Big Display of Many Products," Manitowoc Herald-Times (December 2, 1959), M-13.

<sup>&</sup>quot;Obituary - David Beach, Jr.," Peoria Journal Star (June 28, 2009).

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the boat. The new Mirro-Craft's "cockpit" amenities made navigating the boat as easy and enjoyable as driving an automobile with touches of "automobile styling" including glass windshields, metal steering wheels, a stern light, glove compartments, and even convertible canvas tops and curtains<sup>16</sup>

In 1958, the Mirro-Craft was also selected by Evinrude Motors in Milwaukee (the company that pioneered and patented the outboard motor) for testing and publicity of their 1959 line of outboard motors. The Mirro-Craft Runabout was featured in Evinrude commercials, marketing publications and instructional materials. An article in the Mixing Bowl, the Mirro-Company newsletter, reported that Evinrude engineers had claimed the Mirro-Craft "outclassed" many of the other aluminum boats that the company had tested that year.

The boat's sturdy frame best displayed its technological advantage when an employee-navigated Mirro-Craft not only won first place at the popular Winnebagoland Outboard Marathon in 1959 but was the only boat in its class to remain intact in rough waters. "Boats built of fibre glass and other materials came in with broken transoms, split seams and stoved-in-bottoms," it was reported in Mixing Bowl:

"The race proved a real proving ground for the manufacturers of boats... prov[ing] that the Mirro-Craft is well designed and built to withstand the roughest weather that the ordinary family boater would ever be exposed to. It was proof enough that the solid welded hull... can withstand unusual punishment in the heaviest sea. We at Mirro can be justly proud of the Mirro-Craft '16." "17

Approximately 100,000 Mirro-Craft runabouts were produced in Mirro Plant #3 between 1958 and 1962 with almost 400 boats a week assembled by a staff of about 30 workers. In Plant #3, the aluminum hull, keel, and transoms were cut from sheets of aluminum and welded together and flotation styrofoam installed. The boat was internally braced and spray painted, and the accessories added. After completion, most of Plant #3's Mirro-Craft boats were transferred to a rail terminal in nearby Plant #2 where they were loaded onto 18 custom freight cars specially-designed with engineered air cushions and delivered to Mirro-Craft distributors across the country. Many small dealers and individual buyers, mostly from Wisconsin and Minnesota, ventured directly to Manitowoc and to Plant #3 to personally take charge of their newly assembled Mirro-Craft boats. 18

After the Mirro-Craft's successful debut in 1958, Mirro developed several new Mirro-Craft products, adding custom features to its initial design to attract consumers of all recreational persuasions. The "Family Runabout," first produced in Mirro Plant #3 in 1959, cost consumers approximately \$950 and seated six passengers on two rows of "luxurious upholstered seats...combin[ing] modern styling with many practical features to make it America's truly family-fun boat." The "Ski 'N' Troll," produced in Mirro Plant #3 starting in 1960, cost consumers approximately \$995 and included double-sided seats with one side facing backward to facilitate water skiing, diving, and troll fishing. The "Camp 'N' Cruise," also produced at Mirro

<sup>&</sup>lt;sup>16</sup> "Boating Growth Told by Zeckel," Manitowoc Herald-Times (November 4, 1958), M-7.

<sup>&</sup>quot;Mirro-Craft Boats Planned," Manitowoc Herald-Times (January 24, 1958), M-11.

<sup>&</sup>quot;Fiberglassics Library - Mirro Craft - 1959 to 1961 Mirro Craft outboard models," http://www.fiberglassics.com/library/Mirro Craft .

<sup>&</sup>quot;Fiberglassics Library - Mirro Craft - 1960 Mirro Craft brochure," http://www.fiberglassics.com/library/Mirro\_Craft .

Joseph E. Choate, "Recreational Boating: The Nation's Family Sport," <u>Annals of the American Academy of Political and Social Science</u>, Vol.313 (September 1957), 112.

<sup>&</sup>lt;sup>17</sup> Mixing Bowl, Vol.21, No.2 (1959), 3.

<sup>18</sup> Mixing Bowl (February-March 1960), 3-5.

Mixing Bowl (May 1959), 6-7.

Phone interview with John Singer, December 13, 2013.

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Plant #3 starting in 1960 and marketed at approximately \$845, eliminated a second row of seats from the Family Runabout to accommodate sleeping bags for overnight passengers. New 12 and 14 foot "cartop" fishing boat models were produced and sold in 1961. All of these models were developed at Mirro Plant #3.

Soon rivaling the Star Metal Boat Company as the country's top producer of aluminum boats, the Mirro-Craft was showcased in MotorBoating magazine in January 1960's "take home boat show" issue as one of the country's most popular outboard vessels. Mirro proudly exhibited its new hometown water craft in retail stores across the Manitowoc-Two Rivers area and at marine shows across the country, boosting Mirro sales for the 1950s and early 1960s. The excitement for the Mirro-Craft line within the Mirro company itself was reflected in several newspaper articles and by large illustrated spreads in its own company newsletter, Mixing Bowl. The newsletter offered employee discounts on their own personal Mirro-Craft purchases and profiled workers riding in their own personal Mirro-produced craft. Mirro employees raced the Mirro-Craft in boating competitions and local marine showcases and even rode the boat in local parades including a "grand show" at Manitowoc's 125<sup>th</sup> anniversary celebration in 1961 where the Mirro-Craft was displayed as a "symbol of progress." as displayed as a "symbol of progress."

In 1962, the Mirro-Craft production facility in Manitowoc's Plant #3 was moved to the Mirro company's 1922 rolling mill. At the same time, Mirro-Craft moved its production focus to its fishing boats and soon discontinued the Mirro-Craft runabout models. The departure of the Mirro-Craft production line from Plant #3 also signaled a change in the Mirro-Craft's construction method. After 1962, instead of fully welding all of the Mirro-Craft seams, Mirro assembled its boats using metal rivets, following more conventional and inexpensive industry standards. The Mirro-Craft boat line was purchased by former Mirro employees in 1982 and production was moved to Gillett, Wisconsin. Production of Mirro-Craft brand boats continues today under Northport Corp. of St. Cloud.<sup>21</sup>

### Post-World War II Wisconsin Boating Culture

In producing the Mirro-Craft, Mirro sought to modernize its image and looked to the recreation activities of its neighbors in Wisconsin and across the nation for inspiration. With boating as one of the fastest growing industries in America, the late 1950s was an opportune time for Mirro to enter the business of selling small recreational craft. With an estimated three million recreational boaters in 1957 alone and \$2.25 billion dollars in expected boat sales in 1958 (11% higher than the year before) Mirro-Craft's sales division saw the potential for a massive sporting product windfall. With an estimated 45% of outboard boats sold to customers in the Great Lakes states of Minnesota, Wisconsin, Iowa, Michigan, Indiana, and Ohio, Mirro-Craft officials believed in their own "definite advantage over the competition."

<sup>19 &</sup>quot;Fiberglassics Library - Mirro Craft - 1959 to 1961 Mirro Craft outboard models," http://www.fiberglassics.com/library/Mirro Craft .

<sup>&</sup>quot;Fiberglassics Library - Mirro Craft - 1960 Mirro Craft brochure," http://www.fiberglassics.com/library/Mirro\_Craft.

<sup>&</sup>quot;Ad - New for 1961," Manitowoc Herald-Times (February 16,1961), 2-M.

<sup>&</sup>lt;sup>20</sup> Cover, MotorBoating (January 1961).

<sup>&</sup>quot;1961 Outboard Boats," MotorBoating, (January 1961), 147.

Mirro Mixing Bowl, Vol.21, No.2 (1959).

Mirro Mixing Bowl, Vol.21, No.4 (1959).

<sup>&</sup>quot;Manitowoc Celebrates Its 125th Birthday with a Grand Show," Manitowoc Herald-Times (July 31, 1961), 10-M.

<sup>&</sup>lt;sup>21</sup> Phone interviews with John Singer, December 10 and 13, 2013.

<sup>&</sup>quot;MirroCraft - Overview," http://www.mirrocraft.com/about-us/overview/, visited December 13, 2013.

<sup>&</sup>lt;sup>22</sup> "Boating Growth Told by Zeckel," Manitowoc Herald-Times (November 4, 1958), M-7.

Property name _	Mirro Aluminum Company (Aluminum Goods Manufacturing Co.) Plant #3	NPS Project Number
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The rise in organized outdoor recreation after World War II extended to recreation along the nation's waterways, particularly in Wisconsin. With post-war Americans enjoying higher wages and more leisure time than the previous generation, their renewed enthusiasm for outdoor recreation found expression in increased sporting along lakes, rivers, and streams. Fishing, camping, waterskiing, canoeing, and pleasure boating increased and improvements to recreational waterways and to recreation technology including advances in boat construction, engines, steering, and automobile trailers made accessing and enjoying water sports easier and more affordable. The numbers of American pleasure craft swelled from less than 2.5 million in 1947 to 5.25 million in 1955, making pleasure boating one of the nation's newest favorite pastimes.<sup>23</sup>

The American Midwest, dubbed the "pleasure boating center" of the United States in 1965 after a decade-long period of unparalleled industry growth, represented a large portion of the nation's recreational boat sales. Wisconsin in particular became one of the most attractive mid-century boating markets in the country, with boat owners in 1961 numbering over 200,000. Boating Wisconsinites soon demanded from their state and local governments the improvement of local waterways, more boat mooring and storage facilities, more launching ramps, more shoreline camping, parking, and restroom facilities. Boating magazines, boat races, and boat shows kept Wisconsin boaters informed of the latest in water craft products and helped sustain a vibrant boating consumer market that remains strong today.<sup>24</sup>

Increased fishing, water skiing, and pleasure boating was accommodated by the production and sale of new kinds of personal water craft. Sporting experts estimated that half-a-million Americans owned personal sailboats and four million owned outboard motor boats like those made by Mirro-Craft in the late 1950s and early 1960s. By the early 1960s, the recreational boat industry reported \$2.5 billion in annual sales generated by mostly working class boating enthusiasts. The most popular personal pleasure craft of the 1950s, the small 10 to 20 foot-long runabout, easily transportable on car-hitched trailers, light and fast with an outboard motor, was marketed by dozens of American companies and constructed out of a variety of materials: wood, plywood, fiberglass, and, the newest material in boat manufacturing, aluminum. In Wisconsin, 93% of all registered boats in 1961 were small outboard motor craft like runabouts.<sup>25</sup>

Other well-known lightweight metal boat manufacturers in the 1950s and 1960s included Harwill, Inc. of St. Charles, Michigan, manufacturer of the "AeroCraft;" the Southwest Manufacturing company of Little Rock, Arkansas, manufacturer of the "Arkansas Traveler;" the Flour City Ornamental Iron Co. of Minneapolis, Minnesota, manufacturer of the "Aluma Craft;" and the Mirro-Craft's primary competitor, the Star Metal Boat Company based in Goshen, Indiana, manufacturer of the "Star Boat" and "Starcraft." Starcraft and Mirro-Craft, the two largest manufacturers of aluminum boats in the mid-century, are both still in production. <sup>26</sup>

## **Comparable Sites**

<sup>&</sup>lt;sup>23</sup> Joseph E. Choate, Smooth Sailing Ahead, Vol.3, No.8 (May 1955), 44.

<sup>&</sup>lt;sup>24</sup> Department of Resource Development - State of Wisconsin, Pleasure Boating in Wisconsin (July 1961), 1-3.

<sup>&</sup>lt;sup>25</sup> "Recreational Boating: The Nation's Family Sport," 109-112.

<sup>&</sup>lt;sup>26</sup> "Builders Change Models, Add to Lines," <u>Chicago Daily Tribune</u> (February 8, 1957), A11. "Boatmakers' Market Runs at High Tide," <u>Chicago Daily Tribune</u> (September 27, 1959), A9. <u>Pleasure Boating in Wisconsin</u>, 3.

Property name	Mirro Aluminum Company (Aluminum Goods Manufacturing Co.) Plant #3	NPS Project Number
Property address	2402 Franklin Street, Manitowoc, WI	

In addition to the Mirro-Craft manufacturing facility at Mirro Plant #3, the only boat manufacturer in Manitowoc active in the 1950s and 1960s was the Burger Boat Company, founded in 1863 and originally located across the Manitowoc River from its current facility at 1811 Spring Street, to which the company moved in 1914. Though the company remains in operation today, none of the Burger Boat Company's early facilities on either side of the Manitowoc River are extant.<sup>27</sup>

#### Conclusion

With its lightweight welded aluminum hull and its automobile-inspired styling, the Mirro-Craft runabout was Wisconsin's most popular aluminum boat product and the second largest producer of aluminum boats in the nation during the 1950s and 1960s. Mirro Plant #3, the site of the first Mirro-Craft produced from 1958 to 1962, continues to express the changes that one of Manitowoc's largest employers made to its image and product line in the 1950s, and represents an important chapter in the economic growth of the city.

<sup>&</sup>lt;sup>27</sup> Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 1811 Spring St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 58411.

Property name	Mirro Aluminum Company (Aluminum Goods Manufacturing Co.) Plant #3	NPS Project Number	-72
Property address	2402 Franklin Street, Manitowoc, WI		

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- "Goods takes over plating works plant." Manitowoc Herald-News (August 17, 1928), 2.
- "Local concern buys big interest in the Aluminum Company of Canada, Ltd." <u>The Manitowoc</u> <u>Herald-News</u> (July 2, 1931), 1.
- "Mirro Prepares Big Display of Many Products." <u>Manitowoc Herald-Times</u> (December 2, 1959), M-13.
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- "Mixing Bowl 60th Anniversary edition, 1895-1955, and related Mirro Aluminum materials."

  Aluminum Manufacturing Company (July 1955); online facsimile at http://www.wisconsinhistory.org/turningpoints/search.asp?id=1207 Online facsimile at: http://www.wisconsinhistory.org/turningpoints/search.asp?id=1207; Visited on: 12/11/2013.

Property name _	Mirro Aluminum Company (Aluminum Goods Manufacturing Co.) Plant #3	NPS Project Number
Property address	2402 Franklin Street, Manitowoc, WI	

"Obituary – David Beach, Jr." Peoria Journal Star (June 28, 2009).

Phone interview with Robert Jagemann, building owner, December 10 and 13, 2013.

Phone interview with John Singer, former Mirro manager, December 10 and 13, 2013.

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Sanborn Fire Insurance Map, 2402 Franklin Street, Manitowoc, Wisconsin. 1964.

Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 1512 Washington St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 58811.

Wisconsin Historical Society, Wisconsin Architecture and History Inventory, 2402 Franklin St, Manitowoc, Manitowoc County", Wisconsin, Reference Number 57849.

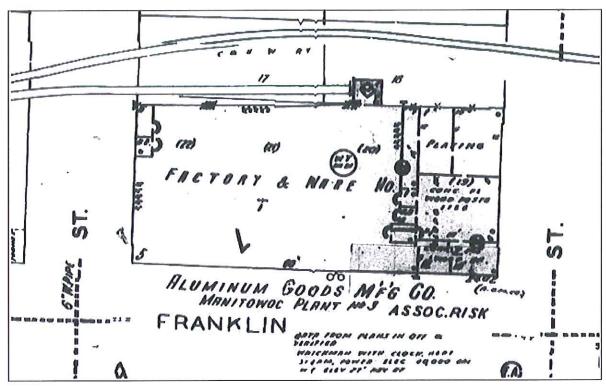


Image 1: Sanborn Fire Insurance map of Mirro Plant #3, 1964.



Image 2: Aerial view of Mirro Plant #3 from the southwest, c.1965. Source: Mixing Bowl 60th Anniversary edition, 1895-1955.

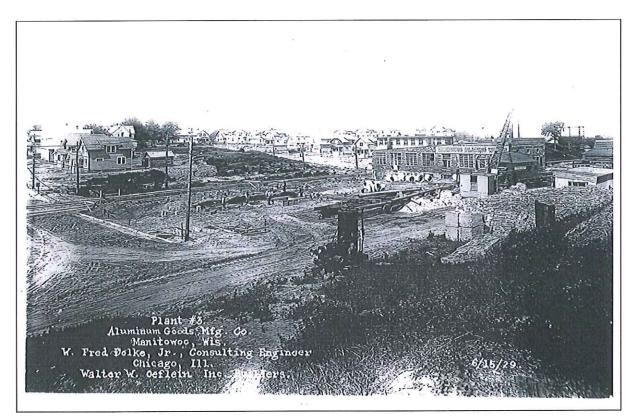


Image 3: Construction of Mirro Plant #3, 1929. Source: Manitowoc Historical Society.

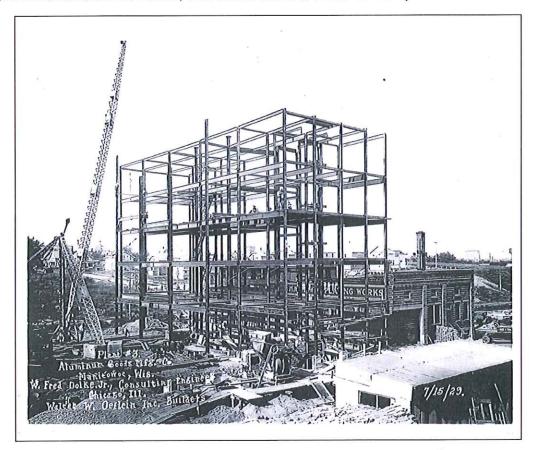


Image 4: Construction of Mirro Plant #3, 1929. Source: Manitowoc Historical Society.

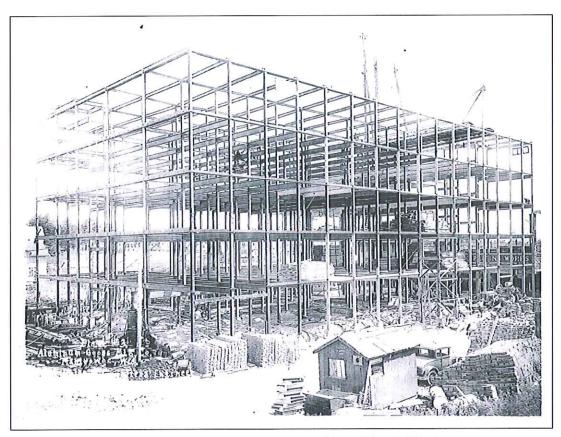


Image 5: Construction of Mirro Plant #3, 1929. Source: Manitowoc Historical Society.

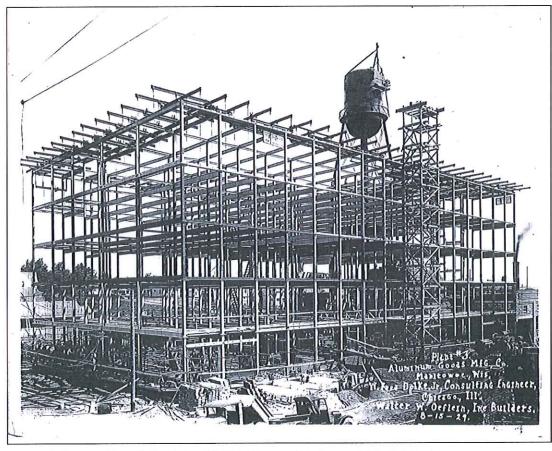


Image 6: Construction of Mirro Plant #3, 1929. Source: Manitowoc Historical Society.

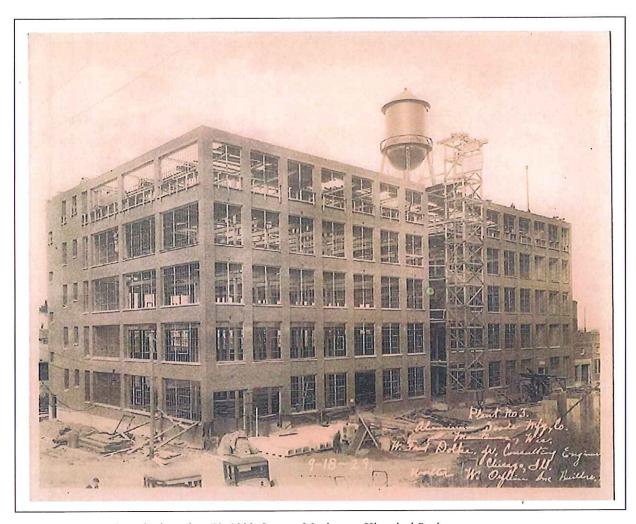


Image 7: Construction of Mirro Plant #3, 1929. Source: Manitowoc Historical Society.

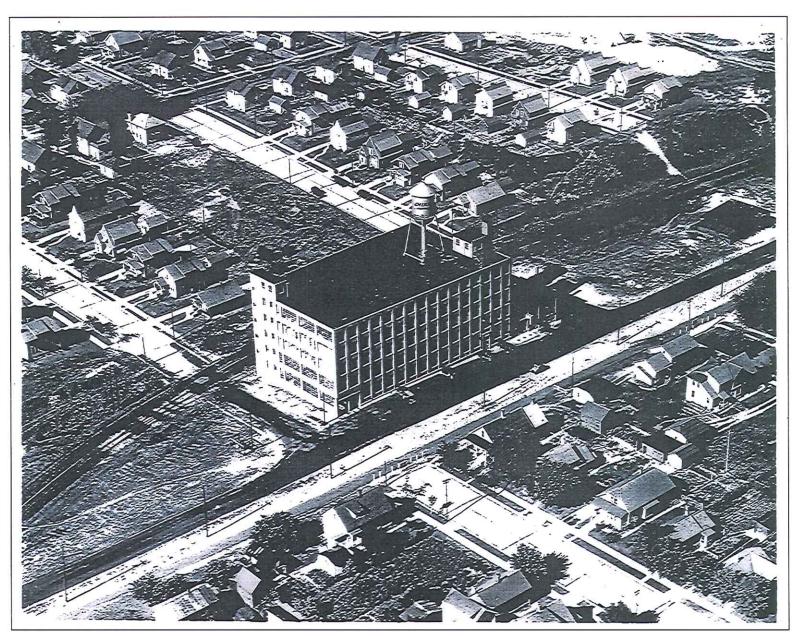


Image 8: Aerial view of Mirro Plant #3 from the southwest, c.1930. Source: Manitowoc Historical Society

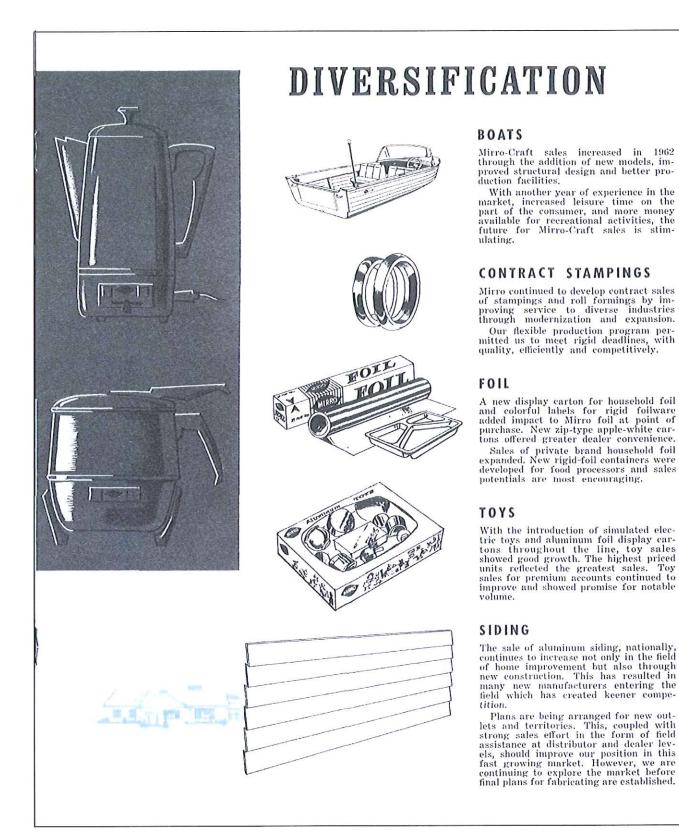


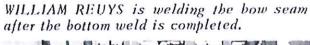
Image 9: Mirro's diversified line of products post-1955. The Mirro-Craft is discussed at upper-right. Source: Mirro 1962 Annual Report.



Image 10: 1960 Mirro-Craft brochue showing later Family Runabout, Ski 'N' Troll, and Camp 'N' Cruise models. Source: www.fiberglassics.com



Image 11: Mirro-Craft boats ready for delivery outside of Mirro Plant #3's south loading doors. Source: Mixing Bowl, Volume 20, Number 11, 1959.





THE EXTRUDED aluminum chine is pictured here being welded to the bottom section of the hull.

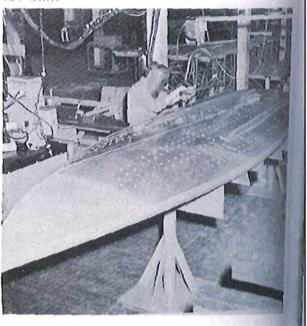
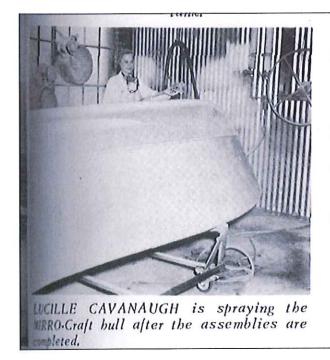


Image 12: Mirro-Craft boats during assembly in Mirro Plant #3. Source: Mixing Bowl, Volume 20, Number 11, 1959.



Image 13: Mirro-Craft boats during assembly in Mirro Plant #3. Source: Mixing Bowl, Volume 20, Number 11, 1959.

DICK WALTERS AND CLIFF PLOECKEL-MANN are riveting the stiffeners on the welded hull.





HENRY KRAMER looks over a completed MIRRO-Craft prior to being prepared for shipment.

Image 14: Mirro-Craft boats during assembly in Mirro Plant #3. Source: Mixing Bowl, Volume 20, Number 12, 1959.



Image 15: A Mirro employee-navigated Mirro-Craft at the 1959 Winnebagoland Outboard Marathon. Source: Mixing Bowl, Volume 21, Number 4, 1959.



Image 16: Employee winners of the 1959 Winnebagoland Outboard Marathon in front of a typical Mirro-Craft. Source: Mixing Bowl, Volume 21, Number 4, 1959.



FREQUENTLY customers come to Plant 3 to pick up boats during nonoperating hours. Harvey Moffett Sr. is assigned to oversee safety and security regulations during these periods.

Image 17: A customer picking up a Mirro-Craft at Plant 3, 1960. Source: Mixing Bowl, Volume 21, Number 11, 1960.



Image 18: The Mirro-Craft in the Two Rivers Snow Festival parade, 1959. Source: Mixing Bowl, Volume 21, Number 2, 1959.



Image 19: Mirro Plant #3 in 2013, south and west elevation view looking northeast.



Image 20: Mirro Plant #3 in 2013, south and east elevation view looking northwest.. The one-story building at right was constructed in the 1970s and replaced an earlier Manitowoc Plating works facility.

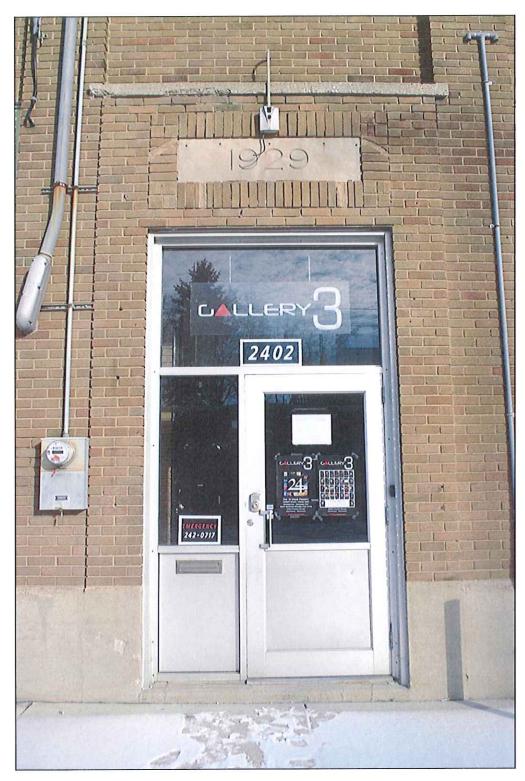


Image 21: Mirro Plant #3 in 2013, south entrance view looking north.



Image 22: Mirro Plant #3 in 2013, north and west elevation view looking southeast.

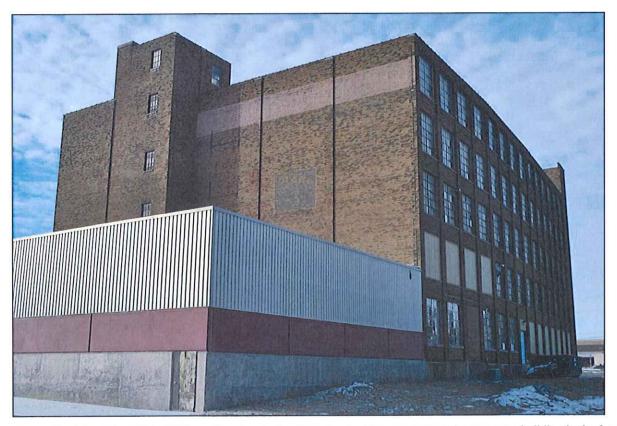


Image 23: Mirro Plant #3 in 2013, north and east elevation view looking southwest. The one-story building in the foreground was constructed in the 1970s and replaced an earlier Manitowoc Plating works facility.



Image 24: First floor vestibule, view looking north



Image 25: Typical floor, view looking west.



Image 26: Typical floor, view looking south



Image 27: Typical floor, view looking north

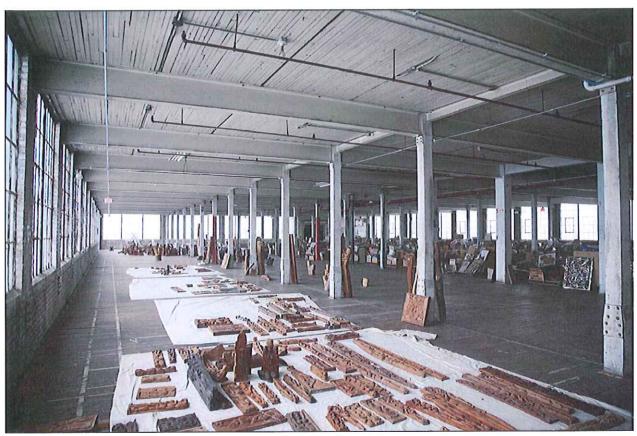


Image 28: Typical floor, view looking west.



Image 29: Typical floor, view looking northwest



Image 30: Typical floor, detail of exposed structure.



Image 31: Typical office view.

