

Metal Surfaces Equips Itself for Bold Future With State-of-the-Art Addition



Overview of the 150-ft, double-lined reel-to-reel machines in the new building. Each customized line, designed by MSI's engineering staff, is valued at more than \$1 million. The company has permits to incorporate additional lines, and management plans to bring them on in accordance with customer demand.

A strong presence in California since 1955 and one of the national/international jobshop leaders for the past 20 years, Metal Surfaces, Inc. in Bell Gardens (Los Angeles, CA) has once more expanded its outreach with the recent completion of a 28,000 ft² "state-of-the-art," continuous plating facility. Providing engineering plating services is MSI's specialty, and it's taking aim at doubling revenues.

Providing its aerospace, electronics, automotive and medical industry customers with "one-stop shopping" for their plating needs was one of the main objectives held by management of Metal Surfaces Inc. (MSI) when their sparkling new, two-story, \$2-million, 28,000 ft² building went on line. At this time, the building features three custom-designed reel-to-reel plating lines, each 150 ft in length. When permitting was acquired, the South Coast Air Quality Management District (SCAQMD) authorized eight such lines. The

company plans to bring new lines into service on a gradual basis over the next two years, depending on customer needs to be the driver.

"Length means speed, and speed means highly competitive pricing in a highly competitive industry. Our goal is to be a low-cost provider of copper, nickel and gold alloys for the electronics market," says Sam Bell, vice president and chief operations officer. "We hope to be able to double our sales."

MSI's engineering team designed the new facility and equipment. The equipment was supplied by major suppliers to the plating industry, with customized circuitry built into the line in accordance with MSI's customer and flexibility requirements. The new building is bright and well-lighted, with skylights that help reduce energy costs. A service trench eight-ft-deep ties into a 300-ft-long tunnel of segregated wastewater lines. The facility's wastewater treatment demands are being phased into the company's existing, award-winning system. As MSI grows, it will continue to adjust the main systems to accommodate increased demand.

Approximately two-thirds of the second floor of MSI's new building is open, giving extra high clearance for the shop area. Windows along a perimeter hallway allow observers to check progress on the shop floor. Photos that illustrate moments from MSI's history—such as the fire of 1972 and the company's subsequent rebirth—line the walls. Several private offices and a conference room are located upstairs, as well as a sophisticated, 1400 ft² laboratory that surpasses that of most jobshops in the industry.

The building also features a laboratory/quality control area with X-ray fluorescent equipment for the reel-to-reel lines. MSI has a liberal "open-door policy" for visitors and local, state and federal environmental personnel, and for guests. For example, Morton Schwartz, CEF, noted consultant and former AESF training course instructor, often "drops in" at the lab, working on special projects.

Standing By Its Mission Statement

According to Don Brown, president and CEO, MSI wants to continue to



A few members of the management team at MSI (L-R): Sam Bell, vice president/chief operating officer; Willard Bell, chairman of the board; Don Brown, president and chief executive officer; and Willie Bell, vice president, facilities.

be a leading provider of *engineering* plating services. "It's our mission to be the *best* provider of such services in those markets we choose to serve," he says. Don refers to the company's five-point mission statement:

- Excellence in meeting the expectations of customers, centering on perceived needs and those defined by specifications and purchase orders; and efficiently applying expertise in engineering plating.
- Meeting or exceeding all environmental requirements to insure protection of the environment and continued profitability.
- A commitment to maintaining a place of business in Bell Gardens.
- Making a profit consistent with expectations of stockholders and adequate for business to grow.
- A commitment to ethical principles that have made MSI successful.

Coming Back to the Core—Plating, Plating, Plating

In line with the philosophy of providing engineering plating services, Sam describes MSI as a "specification" plating shop. He credits founders Willard Bell and Francis Odell (see sidebar) with the philosophy of wanting to be able to give the customers what they want.

"Another plus is that Willard, in particular, has always been eager to try new things," says Sam. "That kind of comes naturally to him, because Chem Research, our sister company, was originally founded to develop electroless nickel. While pioneering electroless nickel, Willard kept looking for other processes."

When plating on plastics became popular in the 1950s, MSI did that,

and did it well. The ignition system used in the Minuteman missiles was one of its noteworthy jobs. When electroless nickel was in its pioneering stages, MSI ran a lot of prototype for computer memory disks.

Sam emphasizes, however, that the shop's mainstay has always been and will always be plating. "We focus on our core—plating—what we do best."

MSI's non-precious plating processes include black chrome, cadmium, copper, electroless copper and electroless nickel, nickel, zinc-nickel and tin-lead. Precious metal processes include gold, indium, rhodium, silver and palladium-nickel. The shop provides other typical jobshop services, too, such as electropolishing, chemical filming, passivation and masking.

ISO 9002 and NADCAP-certified in 1996, MSI counts prime contractors such as Boeing, Aerojet, Parker-Hannifin, AlliedSignal, Motorola and Pratt & Whitney among its clients.

"ISO certification has helped us obtain work in our main product lines," states Sam, "and has broadened our base of international customers. While the bulk of our services are purchased by domestic customers, we do have customers in Singapore, China and other countries."

Sam believes that

MSI's flexibility is a strong factor in its success. "We've never been down," he says. "We've been skinny at times, but there's never been a real lull in our business."

Giving the company its flexibility are its three main support systems in "specification" plating: The main shop's area of non-precious metals, rack and barrel; precious metals department, rack and barrel; and its existing and new reel-to-reel lines.

Some 60 computer terminals are located throughout the plant to facilitate on-line labor tracking. All parts to be finished are barcoded, and a photo or sketch goes along with each job. There may be 500 jobs in-house at any time, and the average turnaround time is two days.

A Facility Designed For Efficiency & Environmental Protection

MSI's original building and its new facility are located on four acres. Any ground not covered by a building is paved, and this shrewdly engineered major improvement was designed so that all processing areas and stormwater run-off flow to the front of the property. The last 85,000 ft² of ground in the back was recently paved—with free concrete. As Sam explains, the company worked a "win-win" deal with seven Los Angeles concrete companies. Over a period of about four months, the concrete producers had a convenient place to "dump" their excess con-



MSI prides itself on providing engineering plating services and all the attention to detail and quality that accompany such a reputation. Its new lab is outfitted with state-of-the-art, sophisticated inspection equipment, including inductively coupled plasma and atomic absorption spectrophotometers. Trained personnel insure compliance to the most stringent specifications.



MSI has an award-winning, computer-controlled, multi-million-dollar waste treatment system that utilizes gravity flow from all process areas. (The lines from the new building are routed into the system.) The treatment area is housed outside the two plants in a 20-ft-deep concrete vault. The set-up allows easy access and quick, visual inspection of the stainless steel tanks.

crete—they sent their trucks to the Bell Gardens site. MSI used its own employees to smooth the concrete when it came in and gained a vastly improved piece of property. The resulting pavement is a foot thick, and is good protection against soil contamination, in the event of any overflows or spills.

A Leader in All Technologies

MSI has a long-standing reputation for being a model of advancement for waste treatment operations and plating technology. In 1972, the original facility was destroyed by fire, but was quickly rebuilt and modernized. Management has worked cooperatively with local and state air and water quality authorities, as well as with the U.S. Environmental Protection Agency (EPA). Regarding EPA's Metal Products and Machinery (MP&M) regulation, MSI served as a testing site three years ago and is now participating in sustainability studies.

The firm has received two awards from the California Water Pollution Control Association. In adhering to its reputation as a leader in surface finishing technology and innovative ideas, MSI is also a Charter 100 Member of the Strategic Goals Program.

An award-winning, computer-controlled, million-dollar waste treatment system is MSI's commitment to be a good neighbor to its customers and the State of California. The system utilizes gravity flow from all process areas (the lines from the

new building are routed into the system). MSI treats cyanide wastes, hexavalent chromium and general wastes. The treatment area is housed outside the two plants in a 20-ft-deep concrete vault. The set-up allows easy access and quick, visual inspection of the stainless steel tanks.

Strong Professional Ties

More than 200 people are employed by MSI, and a large percentage of

them actively participate in professional associations, such as the AESF (seven members in the Orange County Metropolitan and Los Angeles Branches), the National Association of Metal Finishers (NAMF), and the Metal Finishing Association of Southern California (MFASC). Their involvement extends to leadership positions, too, in the footsteps of founder Francis Odell (see sidebar), who is a past president of the NAMF



Metal Surfaces has always pioneered new processes and tackled the unusual jobs. Sam and Willie Bell are shown with one of the company's more challenging projects, a veneer body for a guidance thruster. MSI is still plating them today, electroless nickel over steel.



In 1972, MSI's original building was destroyed by fire, but was quickly rebuilt and modernized. This overview shows the installation of the new equipment after the fire.

and the MFASC. Sam Bell, for example, is also a past president of the MFASC.

With a solid, technology-based history and an engineered plan for its future, Metal Surfaces Inc. is well-equipped to handle the finishing challenges of today—as well as those of the new millennium. **P&SF**

Two Shops Joined Forces To Make MSI a Strong Competitor

There's a considerable amount of history involved in the success story of MSI, located in an industrial area of Los Angeles. Rather than continually try to outdo each other, two competing jobshops decided to join forces that would expand the capabilities of both and widen their competitive abilities.

Going back to 1955, MSI was owned by Francis "Digger" Odell, a man who later served as president of the NAMF and was selected as the 1989 AESF Industrial Achievement Award recipient. His "friendly rival," as they put it, was Willard Bell, who owned Chem Research. In their cooperative venture, Willard moved Chem Research to Phoenix, AZ to supply quality finishing to a growing area, and Francis remained in Los Angeles. When Francis retired, he sold his interest to the Bell family. Today, Willard (founder) is chairman of the board and keeps an office in Bell Gardens, but is mainly responsible for supervising Chem Research in Phoenix.

MSI is primarily a family-owned jobshop (80 percent). Rounding out the management team is Don Brown, president and chief executive officer; Sam Bell, vice president and chief operations officer; Willie Bell, vice president, facilities; Jerry Margolin, vice president of sales and marketing; Craig Snyder, chief financial officer; Bob Clark, general manager; and Paul Horgan, director of quality.

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