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**NELSON STUD WELDING**  
**LEAVING A GLOBAL FOOTPRINT**

THE MAGAZINE FOR LEADING INDUSTRY EXECUTIVES

# Leaving a Global Footprint

*Produced by Hanim Samara & Written by Hallie Seltzer*

When standing atop the Petronas Towers in Kuala Lumpur, Malaysia, most people think about the amazing sights they are staring at below. It's doubtful that they are wondering how the structure (one of the tallest in the world, towering to 1,483 feet) is actually standing. Nelson Stud Welding, the leading global manufacturer and distributor of weld stud fasteners and application equipment, and the company who did the welding on the magnificent structure, knows all too well the intricacies of such labor.

During World War II, there was a national effort to build military ships, necessary to partake in the tragedy of the times. In a shipyard near San Francisco, Ted Nelson began developing ways to perform the welding duties more effectively. His idea was to pre-drill the wood and then weld a threaded stud from above deck, which proved to be a 300 percent faster process than drilling the steel and wood, inserting a bolt from below deck, and nutting the assembly from topside. This single application earned the Army-Navy E

citation for saving 20 million man-hours during the war effort. Nelson Specialty Welding Equipment Company was incorporated in 1938 as a result of this invention. Ultimately, however, Nelson was an inventor, not a businessman, and he sold the rights to his company, which ultimately became Nelson Stud Welding Inc.

## **Global Footprint**

Now, over 70 years later, Nelson Stud Welding has 450 employees with



average annual revenue in excess of \$200 million and locations all over the world. There are two manufacturing plants in Ohio; and the company also manufactures products in Europe and Asia. The company has 18 regional service centers throughout the world. While Nelson Stud Welding serves a broad range of markets including automotive, construction and industrial markets, its real niche is providing a full-service solution to manufacturing problems.

The art of stud welding is literally an anchor for components to the basic framework of a structure that serves without piercing the framework. It is superior to traditional welding methods. Power Generation is another area where the company is well established. This is not to say it has lost its roots, though, as they are still working in shipbuilding, and have a strong relationship with the American Shipbuilding Association (ASA).

### Guiding the Uncharted Sea

ASA is the most well-established shipbuilding organization, with its shipyards representing 90 percent of all workers engaged in shipbuilding in the United States. It also represents over 100 partner companies that are involved in

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the design and manufacturing of ship systems, components, technologies, equipment, and technical support, which is where Nelson Stud Welding fits in.

ASA has been very helpful to Nelson Stud Welding, as it lobbies for more ship construction, providing more business opportunities. The association also provides business and social contacts beneficial to the company.



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# NELSON STUD WELDING

## Growing and Growing

Nelson Stud Welding is today focused on growth. Terry Sterling, Director of Product Management and Fasteners, explained, "New business is very important, so to grow market share, we must do that through new product offerings." At any given time, Nelson Stud Welding can have between 15 and 25 new products in development, ready to reach the market at planned time intervals.

Terry Sterling has been with the company for 38 years, and certainly knows the importance of hiring the right personnel for the company. Nelson Stud Welding, in its strategy alone, appeals to the type of employees that Sterling likes to see. Due to the diverse product offering and growth-driven business approach, the company appeals to highly motivated people. Another way it attains

new employees is through college recruitment programs. Sterling explained that the company brings in and hires college students in their junior or senior years to serve as interns. The competitive benefits and compensation available, provides it with top-of-the-line employees.



Approximately 95 percent of all manufacturing activity is performed in-house. The only things outsourced are the plating and heat treatments. There is much that goes into the logistics of welding, including the distribution, which Nelson Stud Welding achieves through direct sales. The company uses its various regional service centers to locate the inventory closest to the customer. In foreign markets, it relies mainly on distributors. With its various locations, monitoring inventory is also important, and Nelson Stud

Welding has the process down to a science.

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“We have an internal program that we developed with specific guidelines, and we measure all the variables every day,” said Sterling.

### Facilitating Investments

Another one of the company’s selling points is the fact that it makes very smart investments. “We were part of a major corporation for 30 years with very little capital allocated to us,” said Sterling, “Since our divesture in 2000, funds have been available to us for new products and markets.” Since then, the company continually monitors the investments it makes to be certain the forecasted returns are achieved.

The company recently received its ISO certificate with a focus to reduce the amount of energy it consumes, resulting in a “greener” footprint. Nelson Stud Welding has been certified for five years, and considering energy and solvents are two of the most consumed items in the company, it has been focusing on reducing these requirements.

They have also invested in a new line of welding equipment systems, a product that will be very helpful for shipbuilding. This line of equipment systems is inverter based, meaning they are lightweight and very small compared to their predecessors. The old equipment was so large that it often could not get into the hatches or other necessary areas. The



Behind the glossy red paint of the Nelson Stud Welding diesel stud welder is a story of more than two decades of cooperation between Nelson Stud Welding and Martin Machinery LLC to produce portable quality stud welding systems. Martin Machinery LLC manufactures electric power generators for many applications, including the green power and alternate energy markets, which have seen recent growth. Martin Machinery cogeneration systems across the nation and internationally are fueled by biogas from methane digesters and landfills (and traditional fuels such as natural gas). By maintaining flexible manufacturing capability, Martin Machinery LLC serves global markets including cogeneration, peak shaving, portable power, standby back-up power, paralleling switchgear and heat recovery systems. Recently NSW and Martin introduced two new models of portable diesel generator-stud welders meeting EPA engine exhaust emissions standards. Martin Machinery LLC, in business since 1976, has manufacturing facilities in central Missouri and Lancaster County, Pennsylvania.

## NELSON STUD WELDING



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new inverter equipment can be moved into where they need to do welding.

Additionally, the company invested in a new servo gun that is in beta testing, and will be available to all shipbuilding customers. The new servo gun takes quality and repeatability to new levels, and enables the welding capability of exotic materials not currently possible.

The future growth of the company has much to do with the resurgence of the nuclear power industry, and “it will be a key driver for the next five years,” Sterling said. The company is already very committed to the industry, however. The company is currently near completion of a 12-month program to achieve the highest quality rating one can achieve in the industry. Once it is completed, Nelson Stud Welding will be the only company in the industry to have this certification.

Between Nelson Stud Welding’s investment in new products and investments in its long-standing industry relationships, there certainly seems to be no end in sight to what can be achieved. ■



## COMPANY AT A GLANCE

Established : 1938

Nelson Stud Welding Employees : 450

President : Cynthia Brown

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