Manufacturing Skills Standards Council

Training The Industrial Athlete For the Future

BY LEO REDDY

The Manufacturing Skill Standards Council (MSSC) is on the cutting edge of a historic change in the way industrialized nations train their workforce. Fast-moving technologies are not only transforming the nature of work, but also the nature of the worker.

IT-based equipment and processes are rapidly transforming industrial occupations. Computer numerical controls have transformed machining. "Friction stir" processes will revolutionize the world of welding. Emerging industries based upon nanotechnologies and materials, bioengineering, and alternative energies will re-define industrial occupations. Automation and robotics are virtually eliminating the low-skilled worker. "Employment in high-skilled manufacturing jobs rose 37 percent between 1983 and 2002, while low-skilled factory jobs dropped 25 percent," says a recent study from the Federal Reserve Bank of New York.

To keep pace with technological change, the factory worker of the future needs to be able to fill a variety of occupations over time. He or she needs to be equipped with stronger core academic and employability skills — in computers, math, science, communications, problem-solving, teamwork, customer awareness — to be readily trainable in a multidisciplinary, multi-occupational context. The MSSC calls this agile, flexible knowledge worker the "Industrial Athlete of the Future."

As of this writing, the United States remains the pioneer in consciously trying to build this kind of next generation industrial worker with stronger "core competencies." In 1998, the federal National Skill Standards Board (NSSB), formed under the National Skill Standards Act, officially recognized the MSSC as the "Voluntary Partnership" in manufacturing. The MSSC was responsible for developing industry-led standards, assessments and certifications common across all manufacturing sectors and all production and production support occupations: entry-level through first line of supervision.

The manufacturing community strongly endorsed this approach. Over 700 companies, 4,000 workers, 15 industrial unions, 350 educational institutions, 350 subject matter experts, and $9 million in public and private funding were involved in drafting and validating the standards. The MSSC standards, officially endorsed by the NSSB in 2001, have since formed the basis of the federal definition of advanced manufacturing workforce competencies in both the U.S. Departments of Labor and Education.

Since 2001, the MSSC itself has built a comprehensive system for the MSSC-Certified Production Technician (CPT), applicable to the seven million-plus workers in manufacturing production occupations today. In addition to core academic and employability skills, individuals receiving MSSC CPT certificates must also demonstrate knowledge of the critical work functions of production common across all manufacturing sectors: safety, quality practices & measurement, manufacturing processes & production, and maintenance awareness.

Organized around these four production functions, the MSSC "CPT" system tools include courses (including fully on-line "Fast Track" courses for production workers), textbooks, instructor training, assessment centers, diagnostic tools and credentials. Companies may use the MSSC System Tools both in their own training centers and in cooperation with area community-tech colleges and high schools.

The MSSC "CPT" model is analogous to the widely-used Automotive Service Excellence (ASE) certification system for auto service technicians. Like "ASE," the MSSC aims to qualify front-line workers across most of the nation's factory floors. The MSSC's rapidly growing infrastructure for delivering its certification system tools now includes over 1100 testing sites and 150 MSSC-Certified Teachers.

On its tenth anniversary this spring, the MSSC announced a complete update of its standards, assessments, and courses to ensure that its "CPT" system represents best practice in advanced, high-performance and globally competitive companies. With its updated tools and expanding infrastructure, the MSSC is now focused on nationwide implementation.

The timing could not be better. Manufacturers are overdue in building a pipeline of production workers able to replace Baby Boomer retirements, which will hit manufacturing harder than any other economic sector. The nationwide MSSC certification system for core competencies, if widely adopted, has the tools to quickly fill that pipeline — with "Industrial Athletes of the Future."

MSSC's "Value Proposition" for Companies:

- A pipeline of certified production workers;
- Sharply decreased recruitment costs;
- Elimination of remedial training costs;
- Tool to benchmark workforce against national standards;
- Skills gap identification to increase ROI on training; and
- An aid for attracting qualified, motivated workers.

— Leo Reddy, Chairman and CEO of MSSC, is also the founder of the National Coalition for Advanced Manufacturing, which initially formed the MSSC. He can be reached via e-mail at Leoreddy@aol.com. The MSSC's Web site is located at www.msscusa.org