



## Manufacturing Skill Standards Council

### OVERVIEW

The Manufacturing Skill Standards Council (MSSC) is a nationwide, industry-led organization that focuses on the *foundational* skills and knowledge needed by workers in the nation's advanced manufacturing sector. The MSSC Certification System offers manufacturing production workers the opportunity to demonstrate that they have mastered the skills increasingly needed in the high-growth, technical jobs of the 21st century.

The MSSC System awards the *Certified Production Technician (CPT) certification* to new and incumbent workers who pass the four manufacturing-related modules: Manufacturing Processes and Production; Quality Assurance; Maintenance Awareness; and Safety. Applicable to all sectors of manufacturing, the MSSC System has the potential to certify millions of production workers against industry-recognized, federally-endorsed standards.

In creating this expanded pool of workers with the *foundational* skills needed to keep pace with technological changes, the MSSC can help alleviate the growing skills gap faced by many manufacturers. In its **2005 Skills Gap Report**, the National Association of Manufacturers (NAM) found that 90% of the respondents to its survey of indicated a shortage of skilled production workers. Nearly half reported inadequate employability and problem-solving skills and third reported insufficient reading, writing and communications skills.

The MSSC System provides industry with a new set of tools to ensure that both entering and incumbent workers are flexible, easily trainable, and highly motivated *knowledge workers* in high-performance work organizations. The MSSC assessments require mastery of foundational subjects such as math, science, reading, writing, communications, IT, analysis, problem-solving, teamwork, organization, planning, and basic technical skills--all in a manufacturing context. Just as "ASE" (Automotive Service Excellence) certification is the standard for quality in the automotive repair sector, the *MSSC Production Technician Certificate* will set the quality standard in our nation's factories as its use increases.

Today, the MSSC Production Technician Certification System offers several valuable benefits:

- 1) Decreased recruitment costs by providing job candidates with industry-recognized credentials;
- 2) Increased ROI for training by targeting skill enhancement to the most critical job-related success factors —
- 3) A diagnostic tool to benchmark those aforementioned factors against a high-performance national standard;
- 4) An aid to attracting, motivating and retaining qualified employees;
- 5) Workers with portable, nationally-recognized skills documentation, and;
- 6) Standards by which educators and trainers can align training curriculum with industry needs.

The MSSC was federally recognized in 1998 as the *Voluntary Partnership for Manufacturing*. It is a unique business-labor partnership whose governance members are drawn from major companies, unions, and national associations. The MSSC Board is chaired by Jim McCaslin, President and COO, Harley-Davidson Motor Company. Vice Chairs include John Rauschenberger, Ford Motor Company; Dr. Keith Romig, United Steelworkers; and Kim Green, National Association of State Directors of Career and Technical Education Consortium. The CEO is Leo Reddy, Founder of the National Council for Advanced Manufacturing.

Development of the MSSC's industry-led, federally-endorsed standards and subsequent assessment involved a public-private investment of some \$9 million and the participation of over 700 companies, 4,000 workers, and 300 subject matter experts.

# National MSSC Production Technician Certification System

**The comprehensive MSSC Certification System includes the following elements:**

**Standards-setting** – The MSSC developed and validated national standards for all concentrations of production and production support work with nearly \$9 million dollars in shared government and industry funding. Approximately 700 companies, 4,000 front-line workers, and 300 subject matter experts participated in this standards development process from 1998 to 2001. The U.S. Department of Labor’s National Skill Standards Board formally endorsed MSSC standards in May 2001.

**Assessment** – The MSSC successfully completed development of an on-line assessment of the MSSC production standards in May 2004. For national validation purposes, the MSSC piloted 1500 tests nationwide between September 2004 and February 2005 in four modules: (1) processes and production; (2) safety; (3) quality practices and continuous improvement; and (4) maintenance awareness. Each module is composed of a timed multiple choice and simulation section. Individuals are given 180 minutes to complete each assessment. Now that this assessment has been nationally validated, MSSC offers it commercially. Developing and piloting this assessment has involved an additional \$1 million public-private investment and the participation of 600 workers and students, 200 companies, and 25 assessment centers.

**Documentation and Certification of Individuals** – The fully designed MSSC documentation system consists of the following:

1. ***Documentation for each assessment taker*** that includes the scores for each module taken and an attractive “Recognition Award” that lists the skill areas for each module passed suitable for sharing with an employer.
2. ***A formal “MSSC Certified Production Technician” Certificate*** suitable for framing for individuals who pass all four modules
3. ***A detailed score report*** identifying areas for improvement for each test taker.
4. ***A detailed “Employer Diagnostic Tool”*** documenting the strengths and weaknesses of a minimum number of 10 test-takers whose results are compared against national scores.

**Certification of Assessment, Education and Training Centers** – MSSC uses a standardized procedure for determining the capability of an assessment center to deliver the MSSC assessment and training site proctors. The MSSC Assessment Center Certification Process has been established in order to ensure the integrity of the assessments, the privacy of participants and consistency in testing environment and administration.

**MSSC Textbook and Supplements** - In April 2005, Glencoe/McGraw-Hill, one of the nation’s largest publishers of technical textbooks, released a handsomely illustrated textbook entitled, *High-Performance Manufacturing: Portable Production Skills*. Authored by the MSSC and bearing the MSSC logo, this book is based on MSSC standards and serves as a valuable reference for building curriculum based on MSSC’s industry-led standards. Glencoe/McGraw-Hill also published two supplementary items: a *Manufacturing Applications Booklet* and an *Instructor Resource CD*. The MSSC community is using these materials to build curriculum and training, seeking to link them into the public workforce training system.

**Employer Engagement** – A major MSSC System requirement for state and regional MSSC pilot projects is the creation of Advisory or Manufacturers Councils consisting of industrial corporate leaders and other major stakeholders, including representatives from state and local governments including economic development entities and Workforce Investment Boards; education entities such as community and technical colleges, career-technical high schools, and 4-year colleges and universities; manufacturing extension services; and trade and business associations. Active industry involvement is essential to ensure that companies recognize and reward individuals who secure MSSC documentation and certification. More work is needed to gain widespread industry buy-in to MSSC certification as an advantage for hiring, promotion, and training.