Next Generation Workforce Certification: Innovative Tools for Educating and Upskilling Supply Chain Automation Technicians

Briefing by
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Special Thanks to NCSCA

- MSSC would like to express our special thanks to the NCSCA for the many years of collaboration involved in getting to the point we are at today including:
  - Assistance with providing critical SME to define, identify, & validate our standards.
  - Assistance in providing critical SMEs in the development process of both the e-learning and the hands-skill boss device.
  - Enabling input from industry on career path demand and benefits of the CT-SCA.
MSSC: NATION’S GOLD STANDARD

- National leader in certifying front-line technicians in advanced manufacturing and logistics
- Federally recognized in 1998 under National Skill Standards Act
- Original Production Standards developed by 700+ corporations & national trade associations
- Institutionalized: 2700 MSSC-trained instructors, 1780-authorized test sites, mostly in community colleges and high schools, and 75 field reps, in 50 states.
- Only national certification body accredited under ISO 17024 for Mfg. & Logistics (Personnel Certification) and endorsed by NAM for manufacturing and logistics
- Certifications: Certified Production Technician (CPT); hands-on CPT+; Certified Logistics Technician (CLT); Certified Forklift Technician (CFT),
- **NEW:** Certified Technician-Supply Chain Automation (CT-SCA) : (3 Certifications)
Certified Technician-Supply Chain Automation (CT-SCA): BACKGROUND

- Collaboration between NCSCA, MHI, MSSC, Amatrol, MHEDA
- **CT-SCA:** A person who installs, operates, supports, upgrades or maintains the automated material handling equipment & systems that support the supply chain
- **Comprehensive System:**
  - Industry-defined, nationally validated standards
  - Courseware
  - Instructor Training
  - Assessment
  - Credentials
  - Registry
MSSC CT-SCA 3 Certifications

- Certification- **CTSCA-EM**: Equipment Maintenance - Maintaining Equipment/Systems
- Certification- **CTSCA-ER**: Equipment Repair - Installing, Modifying, Troubleshooting and Repairing Equipment/Systems
- Certification- **CTSCA-NR**: Network Repair - Installing, Modifying, Troubleshooting and Repairing Basic Controllers and Networks
CTSCA EQUIPMENT MAINTENANCE (EM): KEY ACTIVITIES

- Implement and remove equipment/system safety protocols
- Identify and operate major automated equipment/systems
- Monitor machine/system operation
- Ensure key parts and components are available in inventory
- Implement preventive maintenance
- Perform preventive maintenance
- Establish monitoring and maintenance schedule for equipment/lubrication condition
- Safely use hand tools to maintain equipment
- Communicate with co-workers to promote productivity
- Perform technical and administrative duties
Troubleshoot machines – mechanical/electrical/hydraulic/pneumatic systems
Prepare for repair
Repair – mechanical/electrical/hydraulic/pneumatic systems
Install, move or remove equipment
Install and maintain PLCs and PLC modules
Troubleshoot and repair PLCs with discrete I/O PLC modules
Modify, troubleshoot or manipulate standard PLC operating programs and test/verify them for correct operation
Install, maintain, and troubleshoot PLC systems with variable frequency AC drives
Operate and test equipment network system, scanners, and run systems
Certification Assessments

2 Assessments Per Certification:
◦ CTSCA-EM: Equipment Maintenance
◦ CTSCA-ER: Equipment Repair
◦ CTSCA-NR: Network Repair

Each Assessment Process Includes:
◦ 90-120 minute written assessment (online)
◦ Hands-on performance-based assessment using Amatrol Skill Boss-Logistics device

CT-SCA Master Instructor Training:
◦ Held at Amatrol
◦ Build a network of Master Training Center to train local instructors
Value of “Skill Boss” Devices: SBP and SBL

- Adds *Hands-on* feature to MSSC Certifications to validate skills
- Meets ISO 17024 requirement for consistent testing
- Combined with national certification, increases attraction among students to manufacturing and logistics careers
- Makes technician training accessible to much larger number of schools and company training centers, including in underserved rural and urban areas
- Already being used successfully with MSSC Certified Production Technician Plus (CPT+) hands-on program.
Skill Boss- Manufacturing: Hands-On Device for CPT+
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