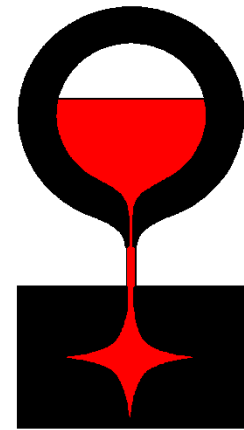


SFSA Apprenticeship Program 2012



Goals

- Develop an apprentice program for SFSA members to recruit and train individuals in specific areas:
 - rigging,
 - pattern making,
 - molding,
 - melting,
 - welding,
 - heat treating,
 - finishing,
 - and investment casting.
- Design the program to be easy to implement and sustain.
- Develop a nationally recognized program with a quality certification process that ensures portability for the artisan.

Deliverables For Apprentices

- A sense of meaning in knowing that they and their abilities are important, valuable and critical to the operation and success of the Steel Casting Industry.
- Competency and knowledge in an area of expertise verified with a standardized and nationally recognized certification program which ensures portability.
- Attractive monetary compensation that reflects the importance of their contribution to the industry.

Deliverables for SFSA Members

- A program for recruiting, training, and retaining a skilled workforce. It would also recognize existing artisans.
- Support for implementing, running, and sustaining the program.
- A catalogue of courses and instructional material for training and testing.
- Help with the development of local and regional instructors.

The SFSA Program would:

- Be designed to be attractive and accessible to new recruits. New workers expect training and mentoring in learning their skills. They need models to emulate and a clear path to advancement, like the Boy Scout advancement program.
- Develop a grandfathering mechanism to recognize existing workers. An infrastructure created by grandfathering in existing qualified artisans as journeymen and masters will create a community of artisans for others to join.
- Recognize expert artisans that can help design the requirements of the program, instruct, and mentor apprentices.

SFSA would support members with:

- Assistance to member companies to initiate, organize, and run an SFSA apprenticeship program.
- Guidance to ensure recruits have the best possible route for becoming a master of their skill.
- Establishing a national structure for recognition of artisans and apprentices. Could include a specific newsletter, meetings, awards, etc.?

SFSA Program would develop:

- Competency in the areas of foundry work identified by the BoD which requires both skills and knowledge.
- Qualification in these areas including:
 - skills and knowledge requirements,
 - training and work requirements,
 - knowledge tests and skill demonstrations.
- Requirements for each of the identified apprentice areas;
 - industry artisans, educators, SFSA staff, and previously established programs will be consulted including AFS CMI courses and certification, ANSI Accreditation Services, NAM Manufacturing Skills Certification, NIMS Competency Based Apprenticeship System, ASW certification, and the DOL Initiatives: The Occupational Information Network and the Industry Competency Model Clearinghouse.

Draft example: Molder Program

- Worker—
 - Capable of performing his job
 - On average one month to complete
- Apprentice—
 - Capable of a range of jobs in the area
 - On average eleven months to complete.
- Journeyman—
 - Capable of performing all jobs in the area
 - Qualified as an instructor
 - On average one year to complete.
- Master—
 - Expert in the area
 - Able to be the train instructors in the area
 - On average one and a half years to complete.

Worker:

- Skills
 - Fill
 - Compact
 - Strike off
 - Core set
 - Close
 - Coat
 - Work safety
 - Environment safety
- Knowledge
 - Basic terms: Cope, drag, etc.
 - Foundry 101
 - Safe work practices
 - Ergonomics
 - Company Policy

Apprentice requirements:

- Foundry knowledge
 - Passes a test on basic foundry knowledge including terminology, process outline,

Apprenticeship requirements: qualifying foundry workers to become an apprentice

- Foundry knowledge
 - Passes a test on basic foundry knowledge including terminology, process outline,
- Safety
 - Passes test on the company safety policies,
 - Works for at least a month in the department without a safety citation
- Company policies
 - Passes a test on company employment policies including compensation, sick leave, attendance,
 - Consistently ontime and attending
- Work experience
 - Completes at least one month in area of apprenticeship with successful evaluation
 - Demonstrate ability to fill any position in the area of apprenticeship

Journeyman requirements: qualifying apprentices to become journeyman

- Foundry knowledge
 - Pass test in area of specialty including terminology, technology,
 - Pass test on casting defects, identification and causes
 - Pass test on quality program requirements

Journeyman level skills:

- Skills
 - Ability to lead on sand/molding/core making
 - Core mold defects
 - Casting defects
 - Able to develop mold and core making procedure for complex castings
- Knowledge
 - Chemistry (basic)
 - Equipment
 - Calibration
 - DOE/5S/6 Σ
 - Can teach Foundry 101 and safety

Master level skills:

- Skills
 - Tooling
 - Work flow
 - Process development
- Knowledge
 - Instructor for apprentice and journeyman levels.

Specifications for Grandfathering in:

- Journeymen—qualifications.
- Masters—qualifications.

Questions??

- Suggestions?
- Weaknesses?
- ?