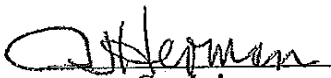
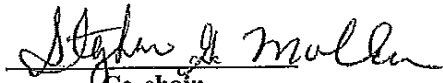


**DEPARTMENT OF WORKFORCE DEVELOPMENT
BUREAU OF APPRENTICESHIP STANDARDS
MADISON, WISCONSIN**

**STATE APPRENTICESHIP STANDARDS
FOR THE
INDUSTRIAL MECHANICAL
&
FLUID MAINTENANCE INDUSTRY**


Bureau Director


Co-chair


Co-chair

**APPROVED AND ADOPTED
OCTOBER 4, 2012**

FOREWORD

These Apprenticeship and Training Standards for the Maintenance Mechanic, Millwright, Machine Repairer, Pipefitter, Welder/Fabricator and Industrial Manufacturing Technician Trades are sponsored by the State Industrial Manufacturing & Fluid Maintenance Apprenticeship Advisory Committee.

The increased skills and versatility needed today by the trades require, as never before, the thorough all-around training and experience provided through apprenticeship as conducted under modern methods.

To meet this need, a State Industrial Mechanical & Fluid Maintenance Apprenticeship Advisory Committee was implemented by the Department of Workforce Development, Bureau of Apprenticeship Standards. Members have been nominated by the respective organizations representing these occupations and have been designated as advisory to the Department in matters relating to the industrial/manufacturing Industry.

These Standards have been adopted as a guide and the minimum standard for employers, employees, and Technical Colleges throughout Wisconsin.

These standards are consistent with the Wisconsin Apprenticeship Law, Wis. Stats. Chapter 106, Wis. Admin Code DWD Chapter 295, Wis. Admin Code DWD 296 and with the Wisconsin Apprenticeship Manual, as revised.

FINAL SECTION ALIGNMENT

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- II. Administration
- III. Personnel of State Industrial Manufacturing & Fluid Maintenance Advisory Committee
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I. Definitions

- A. Apprentice means any person who enters into an apprentice contract with the department and with a sponsor or an apprenticeship committee acting as an agent of the sponsor.
- B. Apprentice Contract means any contract or agreement of service, express or implied, between an apprentice, the department, and a sponsor or an apprenticeship committee acting as the agent of a sponsor whereby an apprentice is to receive directly from or through the apprentice's employer, in consideration for the apprentice's services in whole or in part, instruction in any trade, craft, or business.
- C. Bureau of Apprenticeship Standards (BAS) is the agency within the Department of Workforce Development charged with the oversight responsibilities of Wisconsin's apprenticeship program. BAS approves all Apprentice Contracts in accordance with Chapter 106 of the Wisconsin Statutes.
- D. Certificate of Registration means the acceptance and recording of such program by the department as meeting the basic standards and requirements of the department for approval of such program for federal and state purposes, as shown by a certificate of registration.
- E. Competency means the attainment of manual, mechanical or technical skills and knowledge, as specified by an occupational standard and demonstrated by an appropriate written and hands-on proficiency measurement.
- F. Completion rate means the percentage of an apprenticeship cohort who receives a certificate of apprenticeship completion within 1 year of the projected completion date. An apprenticeship cohort is the group of individual apprentices registered to a specific program during a 1 year time frame, except that a cohort does not include the apprentices whose apprenticeship agreement has been cancelled during the probationary period or who have transferred.
- G. Department means the Department of Workforce Development (DWD) which is the state registration agency for the purposes of 29 CFR 29. The Bureau of Apprenticeship Standards is part of the Department of Workforce Development.
- H. Electronic media means media that utilize electronics or electromechanical energy for the end user (audience) to access the content; and includes, but is not limited to, electronic storage media, transmission media, the Internet, extranet, lease lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic media and/or interactive distance learning.
- I. Employer/Sponsor means any person, firm or corporation regularly engaged in the hiring or training of apprentices that are qualified to train apprentices.

- J. Interim credential means a credential issued by the department, upon request of the appropriate sponsor, as certification of competency attainment by an apprentice.
- K. Journeyworker means a worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation and/or hold a State of Wisconsin certification.
- L. Local apprenticeship committee means an in-plant committee.
- M. Quality Assurance Assessment means a comprehensive review conducted by the department regarding all aspects of an apprenticeship program's performance.
- N. Qualified Individual means an individual who has the skills, knowledge and practical hands-on experience equivalent to an up-to-date journey level person in the Industrial Mechanical & Fluid Maintenance trades. He/she shall also be trained in, and be familiar with, any Maintenance Mechanic, Millwright, Pipefitter safety related work practices.
- O. Registration of an Apprentice Contract means the acceptance and recording of an apprentice contract by the department as evidence of the apprentice's participation in a particular registered apprenticeship program.
- P. Related instruction means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's occupation. Such instruction may be given in a classroom, through occupational or industrial courses, or by correspondence courses of equivalent value, electronic media, or other forms of self-study approved by the department.
- Q. Sponsor means any employer operating an apprenticeship program and in whose name the apprenticeship program is approved by the Bureau of Apprenticeship Standards.
- R. State Committee - The Wisconsin State Industrial Manufacturing & Fluid Maintenance Apprenticeship Advisory Committee is advisory to the Department of Workforce Development and the Bureau of Apprenticeship Standards on matters of apprenticeship and to the Wisconsin Technical College System (WTCS) on matters of related instruction for apprentices.
- S. Transfer means a shift of apprenticeship registration from one program to another where there is agreement between the apprentice and the affected apprenticeship committees or program sponsors.
- T. Unassignment means the temporary interruption of an apprentice contract.
- U. Wisconsin Technical College System is a publicly funded system of colleges subject to Chapter 38 of the WI State Statutes and Technical College System Administrative Rules.

II. Administration

The administration of these Standards shall be the responsibility of the sponsor (Employer). The employer is responsible for the apprentices' instruction and experience as outlined in the schedule of work processes, for the attendance at related instruction classes, and for notifying the Bureau of Apprenticeship Standards of all actions as required by the Standards.

III. Personnel of State Committee

This Committee shall be composed of no less than ten (10) nor more than thirty (30) members. The intention is to have fair representation from employers and local (in-plant) committees on the state committee. The Bureau of Apprenticeship Standards (BAS) will insure that all areas of the state are properly represented on each state trade committee.

- A. Employer representative names will include nominees submitted to the BAS by employers training apprentices in the Industrial Mechanical & Fluid Maintenance trades.
- B. Employee representative names will include nominees submitted to the Bureau labor organizations, collective bargaining agents, or by in-plant local committees. In cases where there is no collective bargaining agent or in-plant committee, nominees will be solicited from employers.
- C. Members will serve for a term of three years and may be re-nominated for further terms. Committee memberships will be staggered to maintain continuity in functioning.
 - 1) Members must be currently and actively participating in the trade and are required to attend at least 75 percent of the meetings over the term of their appointment, unless excused by BAS for good cause.
 - 2) Members must represent organizations that are actively involved with training apprentices at the local level; or
 - 3) Be involved in the development of emerging trades; or
 - 4) Have been involved in the training of apprentices in the last two years.
- D. Exceptions to these requirements can be made by the BAS in order to expand female and minority participation on committees.
- E. The BAS may also designate consultant members to serve as non-voting members, as needed. The WTCS representatives, industry apprenticeship coordinators, instructors and other interested parties in the apprenticeship program may advise and consult with state committee, but they are not allowed to serve as voting members
- F. The State Industrial Mechanical & Fluid Maintenance Apprenticeship Advisory Committee generally meets at least twice each year and their membership includes equal numbers of employer and employee members who have been nominated by organizations involved at the local committee level
- G. The committee operates on a consensus based decision-making process. This means that there may be concerns after discussion, but the

committee members may consent to the proposal anyway and allow it to be adopted. Therefore, reaching consensus does not assume that everyone must be in complete agreement, but that all members can live with the decision. When the committee cannot reach consensus, the BAS will make the final decision.

- H. Members must attend at least 75% of the meetings over the term of their appointment, unless excused by the Bureau for good cause.
- I. The Bureau may remove a person from membership on a committee for one or more of the following reasons:
 - 1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused by the Bureau for good cause.
 - 2) Failure to meet the membership requirements under paragraph III D unless an exception is granted as noted above.
 - 3) Violation of any state apprenticeship statute, rule or standard.
- J. Vacancies may be filled, or representatives changed in term, at the request of the appropriate association.

IV. Duties of the State Industrial Manufacturing & Fluid Maintenance Committee

- A. Recommend/advise on policy and/or program changes in the trade(s).
- B. Formulate minimum state standards (and review them every five years) for the trade(s) and make recommendations on changes to the Bureau including:
 - the period of training
 - minimum work process requirements
 - related instruction
 - probation period
 - employer requirements to serve as a trainer
 - journey level work/apprentice ratios
 - apprentice reviews
- C. Recommend curriculum, related instruction and delivery service requirements for the trade to the BAS and the Wisconsin Technical College System (WTCS).
- D. Assume statewide leadership for the purpose of improving conditions and expanding the number of employers using apprentices in the trade(s).
- E. Support the state program of training for apprentices.
- F. Prepare a policy for the trade on proficiency assessment/testing (for work experience and course work) to be utilized by local (in-plant) committees in determining apprenticeship credit for previous experience/education.
- G. Review and monitor local (in-plant) committee operations (including biennial reports) and activity levels and recommend changes in the

apprenticeship program where appropriate including AA/EEO, where appropriate.

- H. Assist local (in-plant) committees to work out their programmatic and administrative problems.
- I. The state committee will follow these operational guidelines:
 - 1) Meet at least a minimum of two times a year.
 - 2) Election of the Committee co-chairs; an employer representative and an employee representative
 - 3) Conduct meetings in conformity with the open meeting law of Wisconsin.
 - 4) A meeting quorum exists when at least two employer and two employee representatives are present.
 - 5) Official meeting minutes will be prepared by the Bureau of Apprenticeship Standards.

V. Personnel of Local (In-Plant) Committees

Purpose: To oversee the training of apprentices and ensure that the conditions of the Apprentice Contract are being satisfied by all parties. Every apprentice will have access to and be responsible to a local (in-plant) committee.

Each local (in-plant) committee will have a minimum of four voting members; two employer representatives and two from the skilled workforce. If members are added to a committee there must be equal employer and employee representation, unless otherwise specified by a collective bargaining agreement. It is recommended that in the in-plant committee meet quarterly.

An exception may be made to this requirement for employers who have less than five apprentices.

Multi-trade local (in-plant) committees will be authorized provided that at least one member of the committee is a member of the apprentice's trade that is being reviewed. If a member of an apprentice's trade is not on the local committee, an advisor from that trade may be used on an ad hoc basis.

- A. The employer will nominate the employer members who have been involved in the training of apprentices or supervision of skilled workers in the past five years.
- B. Employee members will be nominated as specified in collective bargaining agreement or in their absence, local (in-plant) committees and/or employers will nominate employee members who are skilled workers in the trade or represent active journey level workers.
- C. All local (in-plant) committee rosters shall be submitted to the Bureau.

- D. Exceptions to these requirements can be made by the BAS in order to expand female and minority participations on the committees.
- E. The committee may be requested to advise the BAS and the WTCS on all apprenticeship matters in the trades covered by the committee.
- F. Members must attend at least 75% of the meetings over the term of their appointment, unless excused for good cause.
- G. The Bureau may remove a person from membership on a committee for one or more the following reasons:
 - 1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused for good cause.
 - 2) Failure to meet the membership requirements unless an exception is granted under V D as noted above.
 - 3) Violation of any state apprenticeship statute, rule or standard.

VI. Duties of Local (In-Plant) Committees

- A. Ensure that apprentices get the required range of work process experience and safeguard the training of apprentices on the job.
- B. Review the status and progress of every apprentice prior to the end of the probationary period and recommend any appropriate action to the employer.
- C. Review and make sure that adequate classroom and on-the-job records are kept for apprentices. All reviews must be in writing.
- D. Review and evaluate classroom and on-the-job performance on a regular basis, as recommended by the state committee, (at least annually in person) and before recommending completion to the Bureau.
- E. Recommend credit for previous experience/education in conformity with the BAS policy and procedures.
- F. Advise the BAS and local technical colleges on all matters pertaining to related instruction in the employer's area. Assist in securing related instruction with the state, local technical college or other provider of related instruction.
- G. Respond to surveys and questionnaires sent by the BAS regarding information on participating employers, apprentices, meetings held and AA/EEO for the apprenticeship program.
- H. Conform to the state committee's written meeting procedure requirements, if any.

- I. Encourage parties to an Apprentice Contract to bring issues before the local (in-plant) committee. If not resolved, provide recommendations to the BAS on its resolution.
- J. Take part in statewide trade or industry marketing and apprenticeship promotion.
- K. Recommend modifications to ratios in state standards to help meet workforce needs in conformity with bargaining agreements, when applicable.
- L. Keep minutes and make available to the local Apprenticeship Training Representatives of the BAS, if necessary.
- M. Recommend completion of the apprentice to the BAS.

VII. Minimum Qualifications of Apprentice Applicants

- A. High School graduate or equivalency
- B. Not less than 18 years of age.
- C. Must be physically able to perform the work of the trade with reasonable accommodations and without hazard to themselves or others. Applicants may be required to furnish a statement of physical condition from a physician at the time of the job offer. Applicants may be required to undergo drug or alcohol testing at the time of selection as an apprentice.
- D. Must be able to work in the United States.

VIII. Minimum Qualifications of Employers

- A. The employer must insure that apprentices are trained in the core work processes identified for this trade and employ a full time journey worker, qualified supervisor or other individual to supervise and/or train the apprentice to insure safe training at all times.
- B. The qualifications of the “qualified individual” above will be determined on a case-by-case basis for a new employer only.

IX. Ratio of Apprentices to Journey Workers

- A. In order to assure adequate supervision and instruction of all apprentices on-the-job, the minimum ratio of apprentices to journey workers shall be one (1) apprentice for the shop for one (1) journey worker or qualified individual. Only one apprentice can be trained under this exception. Thereafter, for additional apprentices, the employer must have a full time journey worker.
- B. Apprentices shall be under direct supervision of a journey worker or a qualified individual until trained and qualified.
- C. Apprentices shall be under indirect supervision for those jobs at which they have been trained and qualified. Indirect supervision is defined as having quick and easy access to a journey worker or qualified individual.
- D. Under no circumstances shall apprentices supervise other apprentices.

X. Apprentice Contracts

- A. All apprentices shall have a contract in compliance with DWD 295.07, signed by the apprentice and the employer.
- B. Each copy of the contract will contain the term of the apprenticeship, the approved Trade Information (Exhibit A), the credit recommended (if any) and any special provisions.

XI. Apprenticeship Terms

- A. Terms
 - 1. The term of Machine Repair shall be a minimum of 48 months or 8,000 hours.
 - 2. The term of the Maintenance Mechanic shall be four (4) years of not less than 8,000 hours.
 - 3. The term of the Millwright shall be four (4) years or 8,000 hours.
 - 4. The term of the Industrial Pipefitter shall be four (4) years of 8,000 hours.
 - 5. The terms of the combination trades, Machine Repair/Pipefitter, Maintenance Mechanic/Pipefitter and Millwright/Pipefitter, shall be six (6) years of 12,000 hours.
 - 6. The term of the Welder/Fabricator shall be hybrid at not less than 8,000 hours.
 - 7. The term of the Industrial Manufacturing Technician shall be at not less than 2,000 hours.
 - 8. Employers have the option of choosing a longer term of apprenticeship and/or pursue implementing competency or hybrid apprentice programs in addition to time-based. Hybrid and competency based programs must

be reviewed by the State Industrial Electrical & Instrumentation Apprenticeship Advisory Committee and approved by the BAS.

B. Competency-Based Approach.

Local committees who choose to employ a competency-based approach to apprenticeship must comply with the following requirements:

1. The occupation must be recognized and approved as a competency-based apprenticeable occupation. If the program is not approved by US DOL as a competency based program, the sponsor must consult with the BAS to determine if it is suitable as a competency based program.
2. The on-the-job learning component of the apprenticeship program must be identified in the program standards.
3. The related instruction component of the competency-based approach must comply with all of the provisions of DWD 295 as referenced in the Wisconsin Apprenticeship Manual.
4. Program sponsors must identify within the program standards the required competencies that must be mastered within the program standards, and the required competencies that must be mastered by the apprentice during their apprenticeship.
5. Successful completion of the term of apprenticeship will require that the apprentice demonstrate mastery of identified competencies.
6. Demonstration of the acquisition of the identified competencies must be determined by both written and hands-on proficiency evaluations.
7. All testing and evaluation of the identified competencies must occur in a controlled learning environment that permits accurate and verifiable results by a qualified proctor.
8. Program sponsors must identify and document the methods and means used to qualify testing and evaluation proctors.

C. Time Based Approach

The time based approach is the traditional term of apprenticeship and the term is stated in years, months or hours or a combination of thereof. This approach measures an individual skill through completion of at least 8,000 hours of on-the-job learning as described in a work process schedule.

D. Hybrid Approach

Local committee's that choose to use the hybrid approach to apprenticeship measures an individual's skills through a combination of hours of on-the-job learning and successful completion of competency as described in a work process schedule. The program must comply with the guidelines for the competency-based portion of the apprentice's term of apprenticeship.

X. Probationary Period

The probationary period cannot exceed 25 percent of the length of the program, or one year, whichever is shorter.

- A. During the probationary period, the apprentice or program sponsor may void the contract by written notice to the Bureau.
- B. After expiration of the probationary period there must be good cause provided the Bureau for the cancellation of the Apprentice Contract.

XI. Related Instruction Attendance

- A. The apprentice shall attend school and satisfactorily complete the course of instruction recommended by the State Industrial Manufacturing & Fluid Maintenance Apprenticeship Advisory Committee for the specific applicable trade.
- B. The apprentice shall be paid the same rate for regular school attendance as for work on the job. Apprentices are paid 'straight time' rate for paid school hours. An employer is not required to pay overtime (time and one-half) to apprentices while receiving paid related instruction, unless such requirements are contained in an applicable collective bargaining agreement.
- C. Apprentices shall attend unpaid related instruction on their own time and take such subjects as the employer requires as stated in the Exhibit A.

XII. Schedule of Work Processes

See Trade Information (Exhibit As) attached or as approved by the State Industrial Mechanical & Fluid Maintenance Apprenticeship Advisory Committee.

XIII. Conditions of Work

- A. Apprentices will have the same hours of employment as the journey worker or the employer under whose supervision the apprentice is employed.
- B. Hours of employment shall not conflict with the hours specified for related instruction or with Federal or State regulations.

XIV. Continuity of Employment

When an apprentice is temporarily laid off because of business conditions, the apprentice shall be offered reinstatement before any additional apprentices are employed. An apprentice, suspended for this reason, when reinstated, shall complete the time set forth in the training schedule before the next period may be started.

XV. Evaluation and Completion of Apprentices

A. Record Keeping

Sponsors are required to keep adequate records in order to maintain their apprenticeship program; including selection records, records relative to the operation of the program; such as, job assignment, layoff or termination records, rates of pay, etc, and an apprentice evaluation system so that the employer can properly evaluate the apprentice's performance.

All records must be maintained for a period of five years from the date of last activity.

- B. Upon successful completion of the apprenticeship program, the sponsor shall request the Bureau to issue the apprentice a Certificate of Completion of Apprenticeship. The Certificate shall be signed by the sponsor and the Director, Bureau of Apprenticeship Standards.

XVI. Appeal Procedures/Right of Appeal

In the case of a dispute between the apprentice and the employer with regard to an Apprentice Contract, either party may appeal in writing to the BAS.

- A. In cases of a problem or dispute involving a matter of policy, the matter shall be referred to the State Industrial Mechanical & Fluid Maintenance Apprenticeship Advisory Committee for review. If the State committee cannot satisfactorily resolve the matter, it will provide the Bureau with its recommendations.
- B. For apprentice applicants who are already employees of the firm, initial appeals should be made in accordance with grievance procedures to either the employer or the local union. If no satisfaction is received from this/these resources, the individual may appeal to BAS. For those applicants who are not an employee of the firm, the initial appeal should be made directly to the BAS. If the decision not to accept the applicant is made by the employer, not the in-plant committee, the appeal should also be made directly to the BAS.
- C. All applicants, employers or apprentices have the right of appeal to the Bureau on any recommendation or action taken by the local committee. The advisory status of a local committee shall include the following statement in their disciplinary actions or denial correspondence:
- "Should you feel the recommendation or action taken by the local Apprenticeship Committee to be contrary to the area apprenticeship standards, you have the right to appeal in writing to the Department of Workforce Development, Bureau of Apprenticeship Standards, P. O. Box 7972, Madison, Wisconsin 53707, stating the specific section of said standards or addendum to same which you feel was violated."
- D. Any party to the contract may file an appeal in writing within 20 calendar days of the final decision. When an appeal is received, the BAS Director will review the appeal and issue a written determination within 40 days of the appeal.

- E. If requested in writing within ten days by one of the parties, the Bureau Director's decision may be appealed in writing to the DWD Legal Counsel. The DWD Legal Counsel will review the case and issue a final determination within ten days.
- F. Right to Hearing. A dissatisfied party may file a written request with the BAS or the DWD Legal Counsel for a formal administrative hearing to review the reasonableness of a DWD order as outlined in Chapter 5 of the Wisconsin Apprenticeship Manual. DWD shall respond to a request for an administrative hearing within 20 days. DWD has the discretion to determine whether or not it will hold a hearing. DWD's final decision is reviewable in Circuit Court.
- G. Items not Subject to a Hearing. Actions of the employer that involve the employment relationship and not the apprenticeship program are not subject to a hearing. Violations of employer work rules may not be subject to a hearing contingent upon a review that the employer is not illegally discriminating in its administration of apprenticeship policy.

XVII. Modification of Standards

- A. These Standards may be modified at any time by the State Industrial Mechanical & Fluid Maintenance Apprenticeship Advisory Committee.
- B. The minimum requirements set forth in these Standards shall not be altered by virtue of any collective bargaining agreement.

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Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Hybrid, which has been established to be 3,000 hours. In addition to the specified hours, the apprentice must successfully attain the competencies described in these program provisions. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 3 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 264 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas and shall demonstrate competency, as specified herein. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u>	
	(Min	- Max)
Protect self and other workers from accidents and injuries 1. follow industry-specific safety procedures around electricity, machines, equipment & manufacturing processes 2. minimize potential hazards 3. work following OSHA industrial safety standards 4. maintain clean work areas and follow Six Sigma practices 5. demonstrate awareness of first aid, CPR, and blood borne pathogens 6. inspect, maintain, and report and replace hand tools and power equipment	100	
Operate production equipment 1. works according to production schedules to meet job specifications 2. operates equipment safely and efficiently 3. monitor and inspect products and processes 4. monitor and adjust equipment during operations as needed 5. documents work, work processes and adjustments 6. shuts down equipment properly 7. disassembles equipment and components, if appropriate 8. cleans up tooling, equipment, and work spaces 9. sanitizes equipment according to applicable standards	1000	
Produce quality product 1. verifies product quality following quality work instructions 2. report completed work accurately 3. perform quality checks 4. demonstrate awareness of defects and causes of rework 5. monitors the cost of poor quality (including scrap and rework) 6. apply cost of quality principles to jobs and manufacturing processes 7. apply quality training to job duties and work processes 8. document all quality tests & understand implications and consequences of	500	

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Exhibit A - Program Provisions

documentation

9. adhere to customer specific quality requirements
10. follow company specific quality guidelines

Interpret technical information 200

1. use blueprints, formulas and process control sheets efficiently
2. reference project plans and documents by completing an apprenticeship Job Book or checklist of competency completion
3. apply job specifications to work processes accurately
4. interprets production orders properly
5. follows quality specifications accurately

Measure and inspect work using mechanical tools and testing equipment 200

1. measure and visually inspect materials, products or parts, and finished goods accurately in accordance with job specifications
2. apply math to measuring and inspection of work
3. interpret tolerances using blue prints and job specifications
4. use gauges and measuring devices accurately
5. verify workmanship and compliance with job specifications
6. identify and report non-compliant stock, material, parts, or finished goods
7. inspects materials, parts, products, or finished goods in accordance with quality
8. select and use hand and mechanical tools appropriately
9. use applicable systems to report results and document work

Demonstrate knowledge of routine equipment maintenance. 100

1. inspect equipment
2. demonstrate mechanical problem solving abilities
3. identify when a machine is not working properly
4. apply preventative maintenance practices effectively
5. follow general lubrication guidelines
6. maintain machine components following manufacturer specifications (if applicable)
7. follow basic troubleshooting guides
8. assist and communicate with maintenance personnel on equipment malfunctions
9. demonstrate awareness of basic maintenance concepts

Demonstrate knowledge of inventory and material processes. 100

1. apply lean manufacturing principles to work processes
2. compare inventory flow to roles and responsibilities
3. demonstrate aware of process flows in a manufacturing plant
4. identify material management processes
5. demonstrate awareness of logistics related to raw materials and customer deliveries
6. work with production materials according to work schedules
7. apply basic manufacturing equipment operations

Demonstrate knowledge of trends and the current state of the business. 100

1. identify the competition and potential opportunities (Ex. Strengths, Weaknesses, Opportunities and Threats or related analysis)
2. explain the competition and potential opportunities between internal businesses
3. describe the importance of department and plant goals (Ex. Key Performance Indicators)
4. apply basic business terms to manufacturing related work processes
5. demonstrate awareness of both upstream and downstream
6. participate in company leadership briefings
7. relate the job role and trade to keeping jobs in Wisconsin

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Exhibit A - Program Provisions

Demonstrate continuous improvement	100
1. suggests improvements to business and manufacturing processes	
2. uses tools for continuous improvement effectively	
3. minimizes and removes process wastes (associated with water, energy, manufacturing processes, and other resources)	
4. participates in continuous improvement for professional growth	
5. identifies potential defects	
6. follows standard work instructions properly	
7. maintains records regarding machine faults	
8. applies visual management/visual controls through Six Sigma	
9. applies root cause analysis to continuous improvement of manufacturing work processes	
10. applies autonomous maintenance principles	
11. practices quick change overs (Ex. Six-Minute Exchange of Die)	
12. identifies equipment abnormalities	
13. adapts to process changes including cycle times, set-ups, and tooling	
14. participates in cross-training opportunities	
15. understands the business strategies and motives for continuous improvement	
16. applies profitable sustainability concepts to continuous improvement	
Set-up production equipment	200
1. plans for and identifies setup requirements	
2. selects tools and materials	
3. verifies safety	
4. assembles equipment	
5. performs mechanical setup according to employer's Standard Operating Procedure manual, and equipment manufacturer's specifications	
6. tests and verifies setup	
7. adjusts setup as needed to meet product and production specifications	
8. interprets visual controls accurately	
9. inspects equipment and components	
OPTIONAL	136
Paid Related Instruction	264
TOTAL	3000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

State Ind Mech & Flu Maint Committee • Madison WI
Industrial Manufacturing Technician • 2-616360022-02-H
Exhibit A - Program Provisions

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
 Paid related instruction:	N/A

 Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

The apprentice must successfully complete Transition to Trainer, which is included in Paid Related Instruction, during the final year of the program. The apprentice might be required by the employer to complete employer-specific training and certifications, such as additional MSSC certifications, CPR or safety training.

State Ind Mech & Flu Maint Committee • Madison WI
Welder-Fabricator • 2-819361010-03-H
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Hybrid, which has been established to be 8,000 hours. In addition to the specified hours, the apprentice must successfully attain the competencies described in these program provisions. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 440 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas and shall demonstrate competency, as specified herein. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

Work Process Description

Approximate Hours
(Min - Max)

Adhere to welding and fabrication health & safety rules and regulations by applying AWS and ANSI Z49 welding health and safety standards, OSHA standards and other required standards correctly.

200

1) AWS and ANSI Z49

- Protect against toxic inhalation and uses purified welding helmets when needed
- Maintain hot zones according to standards
- Handle hot work safely
- Use appropriate personal protective equipment (eyes, head, face, ears, fingers/toes, hands and feet, lungs) based on conditions
- Maintain fresh air and ventilation and monitors for oxygen displacement

2) OSHA

- Follow lock-out and tag-out procedures
- Demonstrate awareness of confined spaces and complies with entry/exit safety training
- Locate and interpret MSDS information
- Protect self and other workers from possible electrical hazards and electrocution
- Apply fall protection safety based on conditions
- Use ladders safely

3) Other

- Follow permitting procedures including depressurizing and cleaning pipes and systems
- Maintain clean and safe work areas
- Use tool, machine and shop equipment safeguards
- Lift and move metal, materials, assemblies, and finished goods safely using proper rigging techniques
- Protect against fires and is prepared to use fire extinguishers

State Ind Mech & Flu Maint Committee • Madison WI
Welder-Fabricator • 2-819361010-03-H
Exhibit A - Program Provisions

- Respond to emergencies based on employer specific training

Interpret technical drawings, prints, job specifications and orders 260

- identify materials of construction
- read the bill of materials
- identify title block contents
- identify and select fasteners

Weld ferrous and non-ferrous metals according to prescribed techniques and industry standards using all of the following methods, and in positions based on customer and employer needs: Shielded Metal Arc Welding (SMAW); Gas Metal Arc Welding or MIG welding (GMAW); Gas Tungsten Arc Welding or TIG welding (GTAW); Flux Core Arc Welding (FCAW). 3200

- inspect welding equipment and completes equipment validations
- troubleshoot welding and shop equipment
- perform routine and preventative maintenance on welding machines and equipment
- obtain and maintain industry certifications based on employer need

Produce precision fabricated parts and assemblies according to specifications 2200

- apply math calculations in the context of prints and job specifications
- prep base metals by cleaning, cutting, grinding, sandblasting, priming, painting, and other procedures
- measure metal and material stock
- lay out parts, shapes and locations
- set-up machines based on conditions and jobs
- perform cutting, sawing, drilling, shearing and punching
- assemble parts, pieces, and components
- verify work quality and tolerances
- perform routine and preventative maintenance on assembly and fabrication machines and equipment

Perform various cutting processes 400

- produce parts according to prints and specifications
- apply plasma cutting safety to jobs and work zones
- apply oxy-fuel safety to jobs and work zones
- set up manual and automated cutting equipment
- perform gouging processes
- verify work quality and tolerances
- perform routine and preventative maintenance on cutting equipment
- use other technologies based on employer needs

Perform visual inspection of welds, parts, and assemblies 400

- self-inspect all work
- align assembly components and parts
- adhere to acceptance criteria for given codes and/or company standards
- take corrective action based on conditions
- verify results with blueprint
- use both welding and fabrication inspection equipment such as squares, fillet weld gauges, micrometers, and other inspection resources

Perform basic forming processes 300

- practice safe forming work procedures
- calculate bend allowances
- set up forming equipment based on job requirements

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Welder-Fabricator • 2-819361010-03-H
Exhibit A - Program Provisions

- bend metals
- use hand tools and manual forming equipment
- use automated forming equipment including hydraulic, pneumatic, and electric
- roll various types of metals
- perform other forming processes based on employer specific situations

Perform job set-up operations in order to control distortion 300

- apply metallurgical principles based on job specifications
- apply distortion control techniques
- monitor heat input
- establish welding sequences
- use welding and fabrication fixtures
- select custom fixtures per employer needs

Apply manufacturing principles to welding and fabrication work processes 100

- work efficiently
- minimize waste
- apply lean manufacturing, quality, and continuous improvement to jobs and based on employer needs
- adopt green initiatives when applicable
- adhere to ISO criteria when applicable
- demonstrate awareness to environmental programs when applicable
- effectively apply other manufacturing principles to welding, fabrication, assembly, and cutting work processes

Local Options, including but not limited to 200

- Submerged Arc Welding (SAW)
- soldering and brazing
- resistance welding
- plastic welding/fabrication
- CNC equipment

Paid Related Instruction 440

TOTAL 8000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.05). The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

State Ind Mech & Flu Maint Committee • Madison WI
Welder-Fabricator • 2-819361010-03-H
Exhibit A - Program Provisions

Work credit hours approved:	N/A
School credit hours approved:	
Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

SPECIAL PROVISIONS:

The apprentice must take Transition to Trainer in the final year of his or her apprenticeship in order to complete the program.

State Ind Mech & Flu Maint Committee • Madison WI
Industrial Pipefitter • 2-862281022-02-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 4 years of 8,000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u>	
	(Min	- Max)
Safety and shop fundamentals (including hand and power tools); Training in OSHA safety standards	500	
Layout, fabricate and install piping components; includes layout with a square, templates, offset, miters, bends, saddles, reducers, flanges, elbows, bolt holes, penetration and hangers; Includes fabrication of pipe and tubing, pipe, tubing and fittings, templates, offsets with miters and fittings, bend pipe and tubing, and the fabrication of saddles, reducers, flanges, tees, laterals, "Y" fittings and elbows, a hanger and stands and assembly from a detail.	2500	
Install and maintain; industrial piping systems such as process piping, process steam, steam heating, hot water heating, refrigeration and air conditioning systems	2000	
Install, maintain and trouble shoot hydraulic and pneumatic systems.	700	
Perform rigging operations.	100	
Transfer/handle hazardous materials	100	
Local Optional Work Processes: welding/certified, fittings familiarization; maintain valves and actuators; maintain natural gas, propane and fuel oil emitters and trains; maintain heat treat furnaces and auxiliary equipment.	1524	
Paid Related Instruction	576	
TOTAL	8000	

The above schedule is to include all operations and such other work as is customary in the trade.

State Ind Mech & Flu Maint Committee • Madison WI
Industrial Pipefitter • 2-862281022-02-T
Exhibit A - Program Provisions

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of apprenticeship (DWD 295.05). The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
 Paid related instruction:	N/A

 Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentices to complete standard Red Cross First Aid and CPR courses.

The apprentice in his/her final year must attend the Transition To Trainer course.

State Ind Mech & Flu Maint Committee • Madison WI
Machine Repair • 2-638261030-01-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 48 months or 8,000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and equipment maintenance and repair - All types: bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps; rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics; diagnostics; fabrication (fiberglassing, sheet metal; guard/rails).	3500
Machine and Equipment Installation: Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; fabrication (fiberglassing, sheet metal, guards/rails).	300
Hydraulics/Pneumatics Pumps, valves, cylinders and actuators, lubricants and coolants, trouble shoot, repair and rebuild; compressor repair; piping, tubing and hoses.	1200
Metallurgy: Flame cutting and heating, welding; heat treating; blacksmithing	100
Predictive and Preventive Maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	100
Safety and Orientation: Operating mobile and powerlift equipment; safety; housekeeping; tool and parts crib; general computer operations.	150
Machine Operation: Grinders; drill press; saws; lathes; milling machines; misc. machines; alter and repair fixtures and tools; sharpening tools	1000

State Ind Mech & Flu Maint Committee • Madison WI
Machine Repair • 2-638261030-01-T
Exhibit A - Program Provisions

Local Optional Work Processes: Engineering; turbine and generator repair; dam and river boom repair; electrical; machine building; buildings and facilities; elevator maintenance and repairs; boiler repair; furnace repair; general and carpentry overhead doors; overhead cranes, HVAC	1074
Paid Related Instruction	576
TOTAL	8000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship (DWD 295.05). The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
 Paid related instruction:	N/A

 Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentice to complete basic First Aid and CPR courses.

The apprentice in his/her final year must take the Transition to Trainer Course.

State Ind Mech & Flu Maint Committee • Madison WI
Machine Repair/Pipefitter • 2-638261030-05-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 6 years of 12000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2000 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 864 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and Equipment Maintenance and Repair: All types - bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps; rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics; diagnostics; fabrication (fiberglassing, sheet metal; guard/rails).	3500
Machine and Equipment Installation: Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; fabrication (fiberglassing, sheet metal, guard/rails).	300
Hydraulics/Pneumatics: Pumps, valves, cylinders and actuators, lubricants and coolants, trouble shoot, repair and rebuild; compressor repair; piping, tubing and hoses	1200
Metallurgy: Flame cutting and heating; welding; heat treating; blacksmithing	100
Preventive Maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	100
Machine Operation: Grinders; drill press; saws; lathes; milling machines; misc. machines; alter and repair fixtures and tools; sharpening tools	1000
Safety and Shop Fundamentals: Training in OSHA safety standards; operating mobile and powerlift equipment; safety (including hand and power tools); housekeeping; tool and parts crib; general computer operations	336
Layout, Fabrication and Installation of Piping Components: Includes layout with a square, templates, offset, miters, bends, saddles, reducers, flanges, elbows, bolt holes, penetration and hangers; includes fabrication of pipe and tubing, tubing and fittings,	2500

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templates, offsets with mitres and fittings, bend pipe and tubing; includes the fabrication of saddles, reducers, flanges, tees laterals, "Y" fittings and elbows, a hanger and stands and assembly from a detail

Install and Maintain: Industrial piping systems such as process piping, process steam, steam heating, hot water heating, refrigeration and air conditioning systems	2000
Transfer /Handle Hazardous Materials	100
Paid Related Instruction	864
TOTAL	12000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
 Paid related instruction:	N/A

 Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentices to complete standard Red Cross First Aid and CPR courses.

The apprentice in his/her final year must take the Transition to Trainer course.

State Ind Mech & Flu Maint Committee • Madison WI
Maintenance Mechanic • 2-638281014-01-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 4 years 8,000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and equipment maintenance and repair - all types: bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps, rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics diagnostics; fabrications (fiberglassing, sheet metal, guards/rails).	3500
Machine and Equipment Installation Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; structural layout/fabrication (structural steel, etc.); fabrication (fiberglassing, sheet metal, guards/rails)	500
Hydraulics/Pneumatics: Pumps, valves, cylinders and actuators, lubricants and coolants; trouble shoot, repair and rebuild; compressor repair, piping, tubing and hoses.	1000
Metallurgy: Flame cutting and heating; welding; heat treating; blacksmithing.	100
Predictive and Preventive Maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	300
Safety and Orientation: Operating mobile and powerlift equipment; safety; housekeeping, tool and parts crib; general computer operations.	150
Machine Operation Grinders; drill press; saws; lathes; milling machines; misc. machines; alter and repair	150

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Maintenance Mechanic • 2-638281014-01-T
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fixtures and tools; sharpening tools.

Local Optional Work Processes:	1724
Engineering; turbine and generator repair; dam and river boom repair; electrical; machine building; buildings and facilities; elevator maintenance and repairs; boiler repair, furnace repair, general carpentry; overhead doors; overhead cranes; HVAC	
Paid Related Instruction	576
TOTAL	8000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
School credit hours approved:	
Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

SPECIAL PROVISIONS:

Employers may require apprentice to complete basic First Aid and CPR courses.

The apprentice in his/her final year must take the Transition to Trainer Course.

State Ind Mech & Flu Maint Committee • Madison WI
Maintenance Mechanic/Pipefitter • 2-638281014-09-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 6 years of 12000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2000 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 864 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and Equipment Maintenance and Repair: All types - bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps, rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics diagnostics; fabrications (fiberglassing, sheet metal, guards/rails).	3500
Machine and Equipment Installation: Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; structural layout/fabrication (structural steel, etc.); fabrication (fiberglassing, sheet metal, guards/rails).	500
Hydraulics/Pneumatics: Pumps, valves, cylinders and actuators, lubricants and coolants; trouble shoot, repair and rebuild; compressor repair, piping, tubing and hoses.	1000
Metallurgy: Flame cutting and heating; welding; heat treating; blacksmithing	100
Predictive and Preventive Maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	300
Machine Operation: Grinders; drill press; saws; lathes; milling machines; misc. machines; alter and repair fixtures and tools; sharpening tools	150
Safety and Shop Fundamentals: Training in OSHA safety standards; operating mobile and powerlift equipment; safety (including hand and power tools); housekeeping; tool and parts crib; general computer operations	500
Layout, Fabrication and Installation: Layout, fabricate and install piping components including layout with a square, templates, offset, miters, bends, saddles, reducers,	2500

State Ind Mech & Flu Maint Committee • Madison WI
Maintenance Mechanic/Pipefitter • 2-638281014-09-T
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flanges, elbows, bolt holes, penetration and hangers; fabrication of pipe and tubing, pipe, tubing and fittings, templates, offsets with mitres and fittings, bend pipe and tubing; and the fabrication of saddles, reducers, flanges, tees, laterals, "Y" fittings and elbows, a hanger and stands and assembly from a detail.

Install and Maintain: Industrial piping systems such as process piping, process steam, steam heating, hot water heating, refrigeration and air conditioning systems	2000
Transfer/handle hazardous materials	100
Local Optional Work Processes	486
Paid Related Instruction	864
TOTAL	12000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
Paid related instruction:	N/A

Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentices to complete standard Red Cross First Aid and CPR courses.

The apprentice in his/her final year must attend the Transition to Trainer course.

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Millwright • 2-638281018-01-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 4 years or 8,000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 576 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and equipment maintenance and repair - all types: bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps; rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics, diagnostics; fabrication (fiber glassing, sheet metal, guards/rails).	3000
Machine and Equipment Installation: Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; structural layout/fabrication (structural steel, etc.); fabrication (fiber glassing, sheet metal, guards/rails).	2000
Hydraulics/Pneumatics: Pumps, valves, cylinders and actuators; lubricants and coolants; trouble shoot, repair and rebuild; compressor repair; piping, tubing and hoses.	200
Metallurgy: Flame cutting and heating; welding; heat treating; blacksmithing	100
Predictive and Preventive Maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	100
Safety and Orientation: Operating mobile and power lift equipment; safety; housekeeping; tool and parts crib; general computer operations	150
Machine Operation: Grinders; drill presses; saws; lathes; milling machines; misc. machines; alter and repair fixtures and tools; sharpening tools	150

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Local Optional Work Processes:	1724
Engineering; turbine and generator repair; dam and river boom repair; electrical; machine building; buildings and facilities; elevator maintenance and repairs; boiler repair; furnace repair; general carpentry; overhead doors; overhead cranes; HVAC	
Paid Related Instruction	576
TOTAL	8000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
 Paid related instruction:	N/A

 Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentice to complete basic First Aid and CPR courses.

The apprentice in his/her final year must take the Transition to Trainer Course.

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Millwright/Pipefitter • 2-638281018-03-T
Exhibit A - Program Provisions

Approved: October 4, 2012

TERM OF APPRENTICESHIP: The term of apprenticeship shall be Time-based, which has been established to be 6 years of 12000 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

PROBATIONARY PERIOD: The probationary period shall be the first 2000 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

SCHOOL ATTENDANCE: The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 864 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

WORK PROCESS SCHEDULE: In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

<u>Work Process Description</u>	<u>Approximate Hours</u> (Min - Max)
Machine and equipment maintenance and repair - all types: bearings, friction/anti-friction; belts and chains; print reading/schematics; coupling alignment; gear boxes; bench work; pumps; rebuilding and overhauling, including scrape and alignment; conveyor maintenance; exhaust fans and blowers; roll changes; electric motor replacement; overhead crane repair; robotics, diagnostics; fabrication (fiber glassing, sheet metal, guards/rails).	3000
Machine and Equipment Installation: Print reading/schematics; couplings and alignment; rigging and hoisting; start-up and debugging new equipment; grouting and masonry; form building/carpentry; optical alignment/laser transit; demolition; robot installation; painting; structural layout/fabrication (structural steel, etc.); fabrication (fiber glassing, sheet metal, guards/rails).	2000
Predictive and Preventive maintenance Inspection: Visual/audible inspection; vibration analysis; fluid analysis; diagnostics	100
Machine Operation: Grinders; drill presses; saws; lathes; milling machines; misc. machines; alter and repair fixtures and tools; sharpening tools	150
Safety and Shop Fundamentals: Training in OSHA safety standards; operating mobile and powerlift equipment; safety (including hand and power tools); housekeeping; tool and parts crib; general computer operations	486
Layout, Fabrication and Installation: Layout, fabricate and install piping components including layout with a square, templates, offset, miters, bends, saddles, reducers, flanges, elbows, bolt holes, penetration and hangers; fabrication of pipe, tubing, fittings, templates, offsets with mitres and fittings, bend pipe and tubing; and the fabrication of saddles, reducers, flanges, tees, laterals, "Y" fittings and elbows, a hanger and stands and assembly from a detail.	2500

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Install and Maintain: Industrial piping systems such as process piping, process steam, steam heating, hot water heating, refrigeration and air conditioning systems	2000
Hydraulic and Pneumatic: Install, maintain and troubleshoot hydraulic and pneumatic systems	700
Transfer/handle hazardous materials	100
Metallurgy: Flame cutting and heating; welding; heat treating; blacksmithing	100
Paid Related Instruction	864
TOTAL	12000

The above schedule is to include all operations and such other work as is customary in the trade.

MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage rate during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than the minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

CREDIT PROVISIONS: The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
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School credit hours approved:	
Paid related instruction:	N/A

Unpaid related instruction:	N/A
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Total credit hours to be applied to the term of the apprenticeship:	N/A
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SPECIAL PROVISIONS:

Employers may require apprentices to complete standard Red Cross First Aid and CPR courses.

The apprentice in his/her final year must attend the Transition to Trainer course.