Pacific Gas and Electric Company.

LETTER AGREEMENT NO. 05-71-PGE

IBEW

PACIFIC GAS AND ELECTRIC COMPANY
INDUSTRIAL RELATIONS DEPARTMENT
2850 SHADELANDS DRIVE, SUITE 100
WALNUT CREEK, CALIFORNIA 94598
(925) 974-4104

INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, AFL-CIO
LOCAL UNION 1245, I.B.E.W.
P.O. BOX 2547
VACAVILLE, CALIFORNIA 95696
(707) 452-2700

STEPHEN A. RAYBURN,
DIRECTOR AND CHIEF NEGOTIATOR

PERRY ZIMMERMAN,
BUSINESS MANAGER

December 16, 2005

Mr. Perry Zimmerman, Business Manager
Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P.O. 2547
Vacaville, CA 95696

Dear Mr. Zimmerman:

Company proposes to replace the guidelines for the Apprentice Equipment Mechanic Training Program dated April 1, 1980 with the attached guidelines.

The revised guidelines provide for Apprentice Equipment Mechanics to progress through 28 modules of instruction. Normal progression through the 28 modules is scheduled for 30 months, however some employees may progress more quickly through the program based on their aptitude and previous experience.

Based on the above, wage step progression is based upon completion of the training modules noted below.

Modules Completed	Wage Progression Step	
	Start	(1st Step)
1-5	End 6 Mo	(2d step)
6-10	End 1 Yr	(3d step)
11-15	End 18 Mo	(4th step)
16-20	End 2 Yr	(5th step)
21-24	End 30 Mo	(6th step)

Employees will progress to Unassigned Equipment Mechanic after completing 6 months service at the 6th step (normally 36 months).

Employees must demonstrate required skills in each module before progressing to the next module. Employees with previous experience may request to test out or demonstrate their skill level immediately and will progress to the next module if successful.

These guidelines have been reviewed and are being recommended for approval by the Joint Apprentice Training Committee.

If you are in accord with the foregoing and agree thereto, please so indicate in the space provided and return one executed copy of this letter to the Company.

Very truly yours,

PACIFIC GAS & ELECTRIC COMPANY

By: _____
Stephen A. Rayburn
Director and Chief Negotiator

The Union is in accord with the foregoing and agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO

April 18, 2006

By: _____
Perry Zimmerman
Business Manager

GUIDELINES FOR THE

APPRENTICE EQUIPMENT MECHANIC

TRAINING PROGRAM

PACIFIC GAS AND ELECTRIC COMPANY

AND

LOCAL UNION NO. 1245

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

GUIDELINES FOR THE
APPRENTICE EQUIPMENT MECHANIC TRAINING PROGRAM

I. OBJECTIVE OF THE APPRENTICE EQUIPMENT MECHANIC TRAINING PROGRAM

The need for trained and fully qualified employees to accomplish the duties specified in the equipment mechanic definition in a manner consistent with the Company's Maintenance of Safety and Performance Standards, has resulted in this program which coordinates extensive on-the-job and related academic training. The systematic acquisition of knowledge and skill offers the employee in training the vehicle to attain self-confidence, assuredness and satisfaction in his work, and the correct and safe method of performing Company work.

II. TRAINING

This apprenticeship program is a progressive approach to education. It's designed to be a thirty- (30) month program to complete. It is a modular approach that is intended to build from one module to another. The apprenticeship program will be administered by PG&E's Apprentice Instructors whose responsibility will be to teach, lead, direct, test and help you successfully complete this task.

It is structured such that an aggressive individual or someone with the demonstrated necessary skills may be allowed to finish the program early. Also, as provided by the MASTER APPRENTICESHIP AGREEMENT, provisions are made to allow some extension time if circumstances dictate the need. Any apprentice who completes the program early will attain unassigned equipment mechanic status.

All necessary books and training aids/materials will be provided by PG&E. This does not include the normal tools required for the trade.

A. General Guidelines

Testing Methodology

Each apprentice will be given four (4) hours of study time each week to prepare for the written and/or physical tests while at work. Additionally, each apprentice will be required to spend two (2) hours of his or her own time reading and/or studying as assigned by the Apprentice Instructor.

Weekly assignments will be made and the apprentice is expected to complete ALL the reading assignments, task assignments and worksheets as applicable. In addition, you will also be assigned to work with a journeyman technician who can also help with questions, tasks and so on.

Each module is structured to contain weekly tests and a final test. Some modules will offer a "pre-test" that will allow the apprentice to challenge the final exam. If you are successful, you can move on to the next module. You will only be allowed to challenge each module once. The tests can be written, task oriented or both written and task oriented.

1. It is intended that assignment of the specified hours of training on the job for each period of the apprenticeship will be made to the apprentice as early in the period as is practicable.

2. Hours shown on the Schedule exclude any travel time needed to reach the place where training is to be given; however, such hours include time needed to prepare tools and equipment.

3. Except where otherwise specified, apprentices shall be trained by assignment to work with qualified journeymen.

4. Progressive work experience in all phases of maintenance of most related equipment will be provided throughout the first five periods of the apprenticeship in accordance with the attached Schedule.

5. Assignments during the program will be made for the purpose of rounding out the apprentice's experience.

6. Upon entering each new wage step and period of training, the work assignments in the period shall be such that the apprentice will gain the basic knowledge of equipment, procedures being used and confidence in his or her self. More complex assignments shall be made progressively as the apprentice gains in knowledge and capability.

7. Assignment of duties and work procedures in any period of training shall be confined to those specified for the period or of a prior period.

8. As an apprentice, s/he may be assigned to work without direct supervision only after s/he has been instructed and trained on the duties or work procedures required; has performed such work under direct supervision; and is capable of performing such work safely. Such assignments shall be for the purpose of developing and demonstrating proficiency. It is not intended such assignments be made merely to avoid use of a journeyman.

9. Except in emergency circumstances, an apprentice shall not be temporarily assigned to the classification of Equipment Mechanic, Lead Mechanic or Garage Subforeman. If assigned to such classifications, the apprentice shall not be given the responsibility for duties or work assignments beyond his current step of training.

10. Working alone as an apprentice, s/he may be assigned to perform certain duties of either of the following classifications when he has attained a wage rate equal to or greater than Parts Clerk or (Light Truck Driver).

Those certain duties of these classifications to which s/he may be assigned shall be limited to those duties within his current or prior training periods, for which s/he is qualified and which are within the duties normally performed by a journeyman in the course of his work. Further, such assignments shall include as a purpose the development of the apprentice's proficiency and self-confidence to perform such work as a journeyman, and shall not be made to the extent that the apprentice is in jeopardy of failing to attain goals set forth in the attached Schedule.

11. If an apprentice does not maintain an acceptable on-the-job or academic work level, notice shall be given to Union's Business Representative or his designate.

12. Records

    A. It shall be the responsibility of each apprentice to maintain his own records in collaboration with his immediate supervisor. Upon completion, each record shall be submitted to the Apprentice Instructor or Administrator.

    B. It shall be the responsibility of the Fleet Department to keep necessary files of records on each apprentice and to ascertain that each apprentice has a reasonable opportunity of meeting the Standard of Achievement set forth in these guidelines.

    C. Such records shall at all time be available during the apprenticeship for review by interested supervisors, the trainee, and representatives of Union.

13. In addition to the precedent to these guidelines, the provisions of the Master Apprenticeship Agreement are applicable.

APPRENTICE EQUIPMENT MECHANIC PROGRAM

Academic/On-The-Job Schedule

Topic	0-6 month	7-12 month	13-18 month	19-24 month	25-30 month
ORIENTATION	6/36				
SHOP SAFETY / HAZARDOUS MATERIALS	6/36				
TOOLS AND FASTENERS	12/72				
PHYSICAL SCIENCES/MATHEMATICS	48/288				
PHYSICAL SCIENCE/ENERGY SYSTEMS	60/180				
T.E.A.M.S.	12/72				
WELDING (Floating 6-week period to be scheduled as time allows) Oxygen / Acetylene Arc Welding Mig Welding	12/72				
FUNDAMENTAL AND CONSTRUCTION OF INTERNAL COMBUSTION ENGINES		36/216			
ENGINE TEARDOWN, MEASUREMENT AND REASSEMBLY		30/180			
SPARK IGNITION ENGINES		30/180			
GASOLINE FUEL SYSTEMS		30/180			
ENGINE LUBRICATION, VENTILATION, COOLING AND EXHAUST SYSTEMS		18/108			
ELECTRICITY AND ELECTRONICS			54/324		
COMPRESSION IGNITION ENGINES AND FUEL SYSTEMS			36/216		
MEDIUM/HEAVY DUTY ELECTRICAL SYSTEMS			6/36		
BRAKES			36/216		
AIR CONDITIONING			12/72		
CLUTCHES, MANUAL TRANSMISSIONS AND TRANSAXLES				12/72	
AUTOMATIC TRANSMISSIONS AND TRANSAXLES				18/108	
ELECTRONIC TRANSMISSIONS				12/72	
DRIVELINES				12/72	
SUSPENSION				12/72	
COMPUTER CONTROLS				48/288	
HEAVY DUTY ELECTRONICS AND COMPUTER CONTROLS				30/180	
MOBILE HYDRAULICS					30/180
HYDROSTATIC DRIVES, PTO's AND FINAL DRIVES					18/108
AERIAL HYDRAULIC LIFTS					30/180
NEW TECHNOLOGIES					66/396

The above occupation is a 30 month program. The various work processes list the number of academic hours and on-the-job- work hours scheduled for each apprentice to complete the program. Additional academic study and materials may be assigned by the Apprentice Instructor on an as-needed basis. The on-the-job process will be under direct supervision, indirect supervision, or with a journeyman (depending on job assignment). Once the apprentice has completed the entire apprenticeship program he/she will attain "unassigned mechanic" status and may bid for various journeymen positions.

This program may be completed in less than the assigned 30 month period. Selected topics/modules have "Pre-Tests" which allow the apprentice, with prior experience, the opportunity to challenge the final examination. If he/she passes the pre-test test they will be eligible to challenge the written final test and tasks. If successful, they can move on to the next topic/module. If unsuccessful, they must complete the entire module. Only one (1) challenge per topic/module is allowed.

Grading

Each week you will be given a written test, task assignments, or both a written test and task assignment applicable to the appropriate lesson material. The apprentice will have (1) additional chance to retake the test, before being placed on an action plan.

Your instructor will record your test grades and track your task assignment progress. The weekly tests and task assignments will be reflective of the assigned reading and the final test.

A passing grade on each of the following Standards of Achievement will be required for you to be considered for progression to the next higher wage step. The four (4) Standards of Achievement are as follows:

1. A seventy-five percent, or better, score on the final examination -- Combination of written test and task assignments.

2. Passing the Oxygen / Acetylene Welding Standards of Achievement test.

3. Passing the Arc Welding Standards of Achievement test.

4. Pass the MIG Welding Standards of Achievement Test

Items 2 through 4 are applicable to the floating six (6) weeks that they will be attending welding school.

Testing Criteria

On the final testing day each participant must produce specimens for testing for O&A, ARC and MIG. If any test specimen fails, the participant produces two additional specimens for retesting.

Part 1 -- Final Examinations

Upon completion of all the weekly lessons, within a six-month period, you will be given a final examination. You will receive an eighty (80) question written test and five (5) task assignments from which you will select three (3) to perform and be graded on. The written test will be worth forty percent (40%) of the final grade and each task assignment will be worth twenty percent (20%). The examination will be administered by the Apprentice Instructor. The grade must be seventy-five percent or more to pass.

The graded test will be reviewed by the Apprentice Instructor and the grade entered on your Academic Progress Chart. Your progress will be reported to the Apprentice Program Administrator. If you wish to review the test you must make arrangements with your instructor to do so.

Failure to meet all of the Standards of Achievement will result in the application of Section F of the Master Apprenticeship Agreement.

Pacific Gas and Electric Company

Apprentice Equipment Mechanic
Oxygen / Acetylene - Standards of Achievement Test

Name: _____ Date: _____

Location: _____ Area: _____

Position Butt Weld –10 Gauge Plate

Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Destructive					
Remarks					

Position Lap Weld –10 Gauge Plate

Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Destructive					
Remarks					

Vertical Position Filet Weld - 10 Gauge Plate

Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Destructive					
Remarks					

Position ¾" Pipe to 10 Gauge Plate Weld

Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Destructive					
Remarks					

Key: Use the following in Penetration, Fusion, Porosity and Slag Inclusion columns, if bend test is failed.

G = Good S = Satisfactory U = Unsatisfactory

Use the following in Remarks column, as applicable.

1 = Undercutting
2 = Overlapping
3 = Excessive Weld Reinforcement
4 = Insufficient Weld Reinforcement
5 = Excessively Deep Wash Lines
6 = Burn Through

At the conclusion Primary Shop Training Maximum Time Allowance for Test Welds

Plate Butt Weld - 8 Minutes Plate Lap Weld – 8 Minutes Vertical Filet Weld – 10 Min. ¾" Pipe to Plate – 10 Minutes

Welding Inspector

_____

Pacific Gas and Electric Company

Apprentice Equipment Mechanic Training Program
Arc Welding - Standards of Achievement Test

Name: _____ Date: _____

Location: _____ Area: _____

Position 45° Butt Weld – 3/8″ Plate - E6010 Rod Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Remarks					

Position 45° Butt Weld –3/8″ Plate - E7018 Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Remarks					

Position 45° Filet Weld –3/8″ Plate - E6010 Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Remarks					

Position 45° Filet Weld –3/8″ Plate - E7018 Passed / Failed: _____

Time Started: _____ Time Finished: _____ Total Time: _____

TYPE OF TEST	Penetration	Fusion	Porosity	Slag Inclusion	Test Results Passed / Failed
Visual					
Remarks					

Key: Use the following in Penetration, Fusion, Porosity and Slag Inclusion columns, if bend test is failed.

E = Excellent G = Good B = Barely Satisfactory U = Unsatisfactory

Use the following in Remarks column, as applicable.

1 = Undercutting
2 = Overlapping
4 = Insufficient Weld Reinforcement
5 = Excessively Deep Wash Lines

3 = Excessive Weld Reinforcement
6 = Burn Through
7 = Excessive Time
8 = Crack

Maximum Time Allowance for Test Welds

At the conclusion of training, the students must pass the following SAT below

Plate Butt Weld - 15 Minutes	Plate Butt Weld – 15 Minutes	Filet Weld – 25 Minutes	Filet Weld – 25 Minutes
AWS -E6010 Rod	AWS –E7018 Rod	AWS –E6010 Rod	AWS –E7018 Rod

Welding Instructor: _____

Pacific Gas and Electric Company

Apprentice Equipment Mechanic
MIG Welding - Standards of Achievement Test

Name: _____ Date: _____

Location: _____ Area: _____

Position Weld: - ¾" Pipe to 10 gauge plate
Time Started: _____ Time Finished: _____ Passed / Failed: _____
Total Time: _____
Remarks: _____

3/8" Plate - Fix Position Butt Weld at 45° angle
Time Started: _____ Time Finished: _____ Passed / Failed: _____
Total Time: _____

Type Test Root Bend	Penetration	Fusion	Porosity	Slag Inclusion	Remarks	Test Results Passed / Failed

Type Test Nick Brake	Penetration	Fusion	Porosity	Slag Inclusion	Remarks	Test Results Passed / Failed

10 gauge Plate - Fix Position Fillet Weld at 45° angle
Time Started: _____ Time Finished: _____ Passed / Failed: _____
Total Time: _____

Type Test Visual	Undercut	Cover Pass	Porosity	Cold Lap	Remarks	Test Results Passed / Failed

10 gauge Plate - Fix Position lap weld
Time Started: _____ Time Finished: _____ Passed / Failed: _____
Total Time: _____

Type Test Visual	Undercut	Cover Pass	Porosity	Cold Lap	Remarks	Test Results Passed / Failed

Key: Use the following in Penetration, Fusion, Porosity and Slag Inclusion columns, if bend test failed.

S =Satisfactory U =Unsatisfactory

Use the following in Remarks column, as applicable.
1 = Undercutting
2 = Overlapping
3 = Excessive Weld Reinforcement
4 = Excessive Time
5 = Insufficient Weld Reinforcement
6 = Excessively Deep Wash Lines
7 = Burn Through
8 = Crack

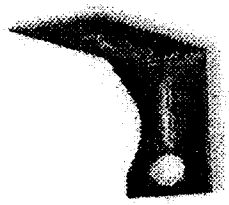
Maximum Time Allowance for Test Welds

At the conclusion MIG Welding Shop Training
10 gauge - ¾" Weld- 5 Minutes
3/8"Butt Weld – 15 Minutes
10 gauge Lap Weld – 5 Minutes
10 gauge Fillet Weld – 8 Minutes

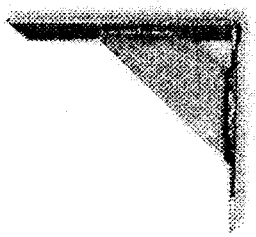
Welding Inspected: _____

Plate Welding Exercise

Instructions: Fabricate the bracket as shown below



Front View

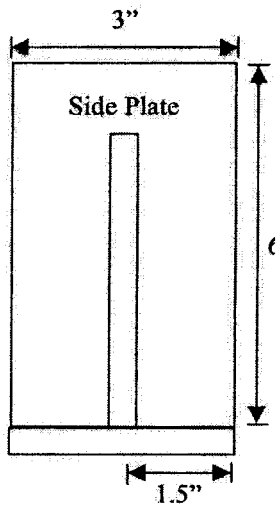


Side View

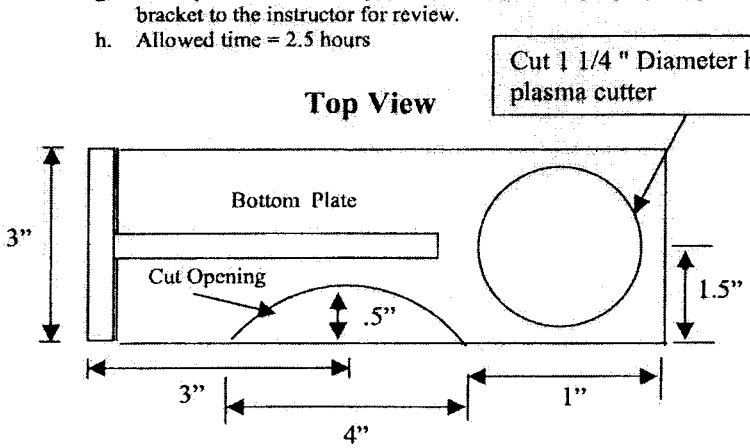
Steps:

1. Using the materials provided, construct a cardstock version of the bracket. Present this to your instructor for review and approval before proceeding.
2. Fabricate a metal version using 10 gauge plate (.125")
   a. Cut three 3" X 6" plates (bottom, side and angle plates)
   b. Fill out the Bill of Materials table
   c. Calculate length of angle plate, then fabricate angle plate
   d. Layout and fabricate bottom plate
   e. Assemble bracket
   f. Fill out the Bracket Fabrication table in the bottom right hand portion of this sheet (see yellow shaded areas)..
   g. Write your name on completed bracket (use sharpie pen) and present this sheet and the bracket to the instructor for review.
   h. Allowed time = 2.5 hours

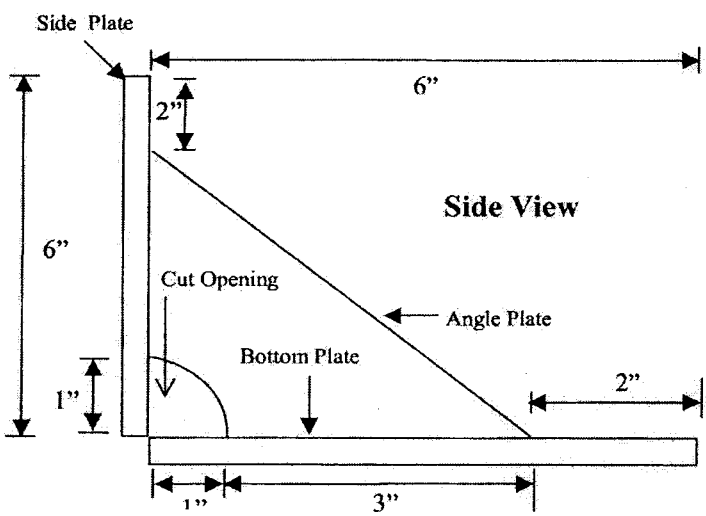
End View



Top View



Bill of Materials	
Quantity	Description



Side View

Bracket Fabrication	
Name:	
Location:	
Date:	
Job:	

Forms, Records and Materials

Your instructor will obtain for you the following materials when you enter the training program:

1. One set of text books.

2. One set Apprentice Manual in loose-leaf binder (this manual)

3. A sufficient supply of 8-1.2x11 inch ruled writing tablets and pencils.

Welding School

At some time during the first 12 months of the training program you will be scheduled to attend 2 sessions at the Company Welding Training School in San Ramon. First session is approximately 2 weeks long. The first session will be devoted to oxy-acetylene welding and will be given in the 0-6 month period. The second session will be devoted to arc welding and be given in the 7 – 12 month period. The third session will be devoted to MIG and be given in the 13-18 month period.

The classes will be held at the San Ramon Valley Conference Center.

Lodging will be provided for you at the San Ramon Valley Conference Center. Reservations will be made for you.

Daily lunches are available at the cafeteria at the San Ramon Valley Conference Center.

You are requested to bring suitable work clothes for the shop training. Any special clothing or equipment required for welding will be provided by the school. You may be requested by the school instructor to shorten your hair or beard, if in his opinion, they present a hazard to your safety.

(Oxy-Acetylene Welding)

First Day

I. Introduction

A. Scope of Training Course

1. Outline subjects to be covered

2. How trainee will be rated

3. Tests and results that must be obtained

II. Setting Up and Operation of Welding Equipment

A. Precautions and Safe Practices

B. Demonstration of Welding Equipment

III. The Weld

A. Demonstration of Fusion and Penetration

IV. Basic Practice On Mild Steel Plate (10 Gauge - .141" Thick)

A. Lesson 1—making a penetration bead on a flat plate without having the bottom of the puddle drop out. Three welds, each about 4 inches in length, should be made with full penetration and without holes.

Second Day

I. Basic Practice

A. Lesson 2—making an edge weld, without welding rod. Form 90° angle between edges of two 3"x6" plates and weld edges together.

Test weld by bending plates against weld until the plates flatten out.

B. Lesson 3—making a weld bead in the flat position, using welding rod.

C. Lesson 4—making a weld bead in the vertical position. The objective is to make weld beads that are parallel to plate edge and are uniform in ripple, width and height.

Third Day

I. Basic Practice

A. Lesson 5—making a weld bead in the horizontal position. The objective is to make weld beads that are parallel to plate edge and are uniform in ripple, width and height.

B. Lesson 6—making a flat lap weld.

C. Lesson 7—making a vertical lap weld. The objective is to make a weld of uniform width without undercut or rolled edges. Fusion should penetrate to the root of angle formed by lap. The weld can be tested by bending the top plate against the weld. After bending, fusion point or weld metal should not be visible on bottom side of plate.

Fourth Day

I. Basic Practice

A. Lesson 8—making a flat fillet weld. The objective is to make weld that is evenly deposited on both plates without undercut or rolled edges. The weld can be tested by bending vertical plate against weld. Vertical plate should bend at edge of fillet and edge of plate should be fused to base plate.

Fifth Day

I. Basic Practice

A. Lesson 10—making a flat butt weld.

B. Lesson 11—making a vertical butt weld.

C. Lesson 12—making an overhead butt weld.

The objective is to make a weld that is uniform in ripple, width, height, and with complete penetration and fusion. Coupons cut from the weld should pass the root bend test.

Sixth Day

I. Practice Cutting and Beveling Pipe

The objective is to make straight cuts with minimum slag adhering. The plate ends should be square with correct bevel.

II. Making A Butt Weld (2-Inch Pipe)

III. Making A Lap Weld (2-Inch Pipe)

The objective is to make a weld that is uniform in ripple, width, height and with complete penetration and fusion. Coupons cut from the weld should pass the root bend test.

Seventh Day

I. Making 3/4" Pipe Nipple Fillet Weld to 10 Gauge Plate

The objective is to make a fillet weld that is evenly deposited on both nipple and pipe, without undercut or rolled edges and without protrusion inside 3/4" nipple. The weld should stand test of attempting to knock nipple from plate when enough force is applied so that distortion shown on both 3/4" plate.

Eighth Day

1. Student practices all exercises taught up to this point.

Ninth Day

I. Welding Practice

A. On daily assignments that trainee has not successfully completed.

Tenth Day

1 Welding Qualification Test

Trainees will be required to pass the following qualification test. This test will be given at the conclusion of the oxygen/acetylene shop training. The test will consist of the following:

A. Position Butt Weld – 10 Gauge Plate

B. Position Lap Weld – 10 Gauge Plate

C. Vertical Position Filet Weld – 10 Gauge Plate

D. Position ¾" Pipe to 10 Gauge Plate Weld

(Arc Welding)

First Day

I. Introduction

A. Outline Exercises To Be Covered

B. Lecture by Representative of Lincoln Electric Company

C. Welding Procedures

D. Safety

E. Joint Position and Electrodes

F. AC and DC machines

G. Current Settings

Second Day

I. Methods of Striking Arc on 3/8" Flat Plate

A. Welding Flat Stringer Beads

B. Run Straight and Parallel Beads

C. Use Center for Filler Beads

D. Run Cover Beads

Third Day

I. Run Stringer Beads Down Hand 45° Angle

II. Fillet Welds Flat Position (no bevel)

Fourth Day

A. Fillet welds vertical (no bevel)

B. Bevel plates fillet welds

Fifth Day

A. Bevel plates vertical welds

B. Stringer beads overhead

Sixth Day

A. Bevel plates, vertical and overhead stringer beads

B. Student practices all exercises taught up to this point.

Seventh Day

A. Student practices all exercises taught up to this point.

Eighth Day

A. Student practices all exercises taught up to this point.

Ninth Day

A. Student practices all exercises taught up to this point.

B. Prepare coupons for Standards of Achievement test.

Tenth Day

Welding Qualification Test

Trainees will be required to pass the following qualification test. This test will be given at the conclusion of the arc shop training. The test will consist of the following:

A. Position 45° Butt Weld - 3/8" Plate – E6010 Rod

B. Position 45° Butt Weld - 3/8" Plate – E7018 Rod

C. Position 45° Filet Weld - 3/8" Plate – E6010 Rod

D. Position 45° Filet Weld - 3/8" Plate – E7018 Rod

(Mig Welding)

First Day

I. Introduction

- A. Outline Exercises To Be Covered
- B. Lecture by Representative of Lincoln Electric Company
- C. Welding Procedures
- D. Safety
- E. Joint Position and Electrodes
- F. Constant Current and Constant Voltage machines
- G. Current/Voltage Settings
- H. Wire Speed
- I. Shielding Gas Flow

Second Day

I. Methods of Striking Arc on 3/8" Flat Plate

- A. Welding Beads
- B. Run Straight and Parallel Beads
- C. Use Center for Filler Beads
- D. Run Cover Beads

Third Day

I. Run Stringer Beads Down Hand 45° Angle

II. Fillet Welds Flat Position (no bevel)

Fourth Day

- A. Fillet welds vertical (no bevel)
- B. Bevel plates fillet welds

Fifth Day

- A. Bevel plates vertical welds

B. Stringer beads overhead

Sixth Day

A. Bevel plates, vertical and overhead stringer beads

B. Fabricate bracket

C. Student practices all exercises taught up to this point

Seventh Day

A. Fabricate bracket

B. Student practices all exercises taught up to this point

Eighth Day

A. Fabricate bracket

B. Student practices all exercises taught up to this point

Ninth Day

(Same as eighth day)

Tenth Day

Welding Qualification Test

Trainees will be required to pass the following qualification test. This test will be given at the conclusion of the arc shop training. The test will consist of the following:

A. Position Weld - ¾" Pipe to 10 Gauge Plate

B. 3/8" Plate – Fix Position Butt Weld at 45° Angle

C. 10 Gauge Plate – Fix Position Fillet Weld at 45° Angle

D. 10 Gauge Plate – Fix Position Lap Weld