

PRESENTER'S GUIDE

"WELDING SAFETY"

Part of the "SAFETY MEETING KIT" Series

THE "SAFETY MEETING KIT" SERIES

This education program is part of the "Safety Meeting Kit" Series. The programs in this series have been created to provide employees with good, basic information on everyday safety and health topics. This series includes programs on the following topics:

- Accident Investigation
- Active Shooter: Surviving an Attack
- Arc Flash
- Back Safety
- Bullying and Other Disruptive Behavior (For Employees and Managers/Supervisors)
- Compressed Gas Cylinders
- Computer Workstation Safety
- Conflict Resolution (Industrial and Office versions)
- Crane Safety (Industrial and Construction versions)
- Distracted Driving
- Driving Defensively
- Driving Safety: The Basics
- Driving Safety
- Dealing with Drug and Alcohol Abuse (Employees and Managers/Supervisors versions) (Industrial and Construction versions)
- Electrical Safety
- Evacuation Procedures
- Eye Safety (Industrial and Construction versions)
- Ergonomics (Industrial and Office versions)
- Fall Protection
- Fire Extinguishers
- Fire Prevention (Healthcare, Industrial and Office versions)
- First Aid (Industrial and Construction versions)
- Fitness and Wellness
- Hand and Power Tool Safety (Industrial and Construction versions)
- Hand, Wrist and Finger Safety (Industrial and Construction versions)
- Hazard Recognition
- Hazardous Materials Labels
- Hazardous Spill Cleanup
- Heat Stress (Industrial and Construction versions)
- Hot Work Safety and the Permitting Process
- I2P2: Injury and Illness Prevention Programs
- Ladder Safety (Industrial and Construction versions)
- Machine Guard Safety
- Materials Handling Safety
- Office Safety
- Rigging Safety (Industrial and Construction versions)
- Safety Audits
- Safety Housekeeping and Accident Prevention
- Safe Lifting (Industrial and Construction versions)
- Safety Orientation
- Safety Awareness for New Employees
- Safety Showers and Eye Washes
- Sexual Harassment (Employees & Managers/ Supervisors versions)
- Sexual Harassment Investigations
- Slips, Trips and Falls

- Walking and Working Surfaces (Industrial and Construction versions)
- Warehouse Safety
- Welding Safety
- Winter Safety
- Workplace Harassment (Industrial and Office versions)
- Workplace Stress
- Workplace Violence

Other products in the "Safety Meeting Kit" line include employee booklets and posters which have been designed specifically to be used with the programs. By combining these three products you have all of the materials you need to promote and conduct a complete safety meeting (for information on booklets and posters contact your local distributor).

WARRANTY/DISCLAIMER

"This program has been created to assist companies that are endeavoring to educate their employees regarding good safety and health practices. The information contained in this program is the information available to the producers of the program at the time of its production. All information in this program should be reviewed for accuracy and appropriateness by companies using the program to assure that it conforms to their situation and recommended procedures, as well as to any state, federal or other laws, standards and regulations governing their operations. There is no warranty, expressed or implied, that the information in this program is accurate or appropriate for any particular company's environment."

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* *In both a print version in the back pocket of this binder and as a PDF on the DVD*

INTRODUCTION TO THE PROGRAM

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Structure and Organization

Information in this program is presented in a definite order so that employees will see the relationships between the various groups of information and can retain them more easily. The sections included in the program are:

- The potential hazards of welding.
- "Designated areas", work permits and confined spaces.
- Fire prevention while welding.
- Protecting against toxic fumes.
- Goggles, helmets and hand shields.
- Gloves, clothing and other protection.

Each of the sections gives an overview of important information in one topic area, providing employees with the basis for understanding how to perform welding operations safely.

Background

Every day in this country more than half a million workers in various industries perform welding, cutting, brazing and soldering operations. These activities require training and caution because they can be dangerous.

Welding and cutting operations cause more than fifty deaths and thousands of injuries annually, and can lead to serious health problems. But these risks can be avoided.

To work safely, employees need to understand the hazards that are associated with welding, and know the work practices and equipment they should use to keep themselves and their coworkers safe while welding is being performed.

Objectives

This education and training program helps employees understand how to weld safely. Upon completion of the program, employees should:

- Know the health, fire and explosion hazards that are associated with welding operations.
- Understand the types of physical injuries and illnesses that can result from being exposed to these hazards.
- Understand how the fire hazards associated with welding operations can be controlled or eliminated by using a hot work permit system.
- Know how to properly choose and wear a respirator to protect against hazardous fumes.
- Know the types of protective equipment that can guard against the flying sparks and slag that are associated with welding operations.
- Know the equipment and safe practices that they should use to protect themselves and others from radiant energy in a hot work area.
- Understand how to get the best protection from flame-resistant shirts, pants, boots and protective outerwear.

Reviewing the Program

As with any educational program, the "presenter" should go through the entire program at least once to become familiar with the content and make sure that it is consistent with company policy and directives.

As part of this review process, you should determine how you will conduct your session. The use of materials such as handouts, charts, etc., that may be available to you needs to be well thought out and integrated into the overall program presentation.

PREPARING FOR THE PRESENTATION

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Structuring the Presentation

In conducting this education session, you should proceed with a friendly and helpful attitude. Remember that the "trainees" are looking to your experience and knowledge to help them relate to the situations shown in the program. It is important to let the trainees interact with you and each other during the training session. Stimulating conversation within the group is one of the best things you, as the presenter of the program, can do to help everyone get as much as possible from the session. Be alert for comments that could help in this area in future sessions and make note of them.

As the presenter, you also should:

- Keep the session related to the topic of welding safety.
- Relate discussions to how the health, fire and explosion hazards that are associated with welding can be reduced by using safe practices and protective equipment.
- Keep any one person or small group of employees in the session from doing all the talking.
- Get everyone involved. Ask questions of those who don't participate voluntarily.
- Clarify comments by relating them to the key points in the program.

Use the "Outline of Major Program Points" section of this guide, as well as the information included in the quiz, as the basis for answering any questions. If you don't know the answer, say so. Tragic results could occur should you provide incorrect or inaccurate information. Remember, this is a positive program on welding safety. Make sure that your attitude and words reflect this, and that the emphasis is always on providing the information needed by the attendees to perform welding operations more safely on the job.

Setting Up the Class and Classroom

Remember, there are a number of things that must be done to "set up" the class as well as the classroom. These fall into several groups of activities, and include:

- **Scheduling and Notification**
 - You can use the scheduling and attendance form to schedule employees into the session (copies can be made using the printed "master" in the back of this binder or from the PDF version on the DVD).
 - Make sure that the session is scheduled so that it fits into your attendees' work day.
 - Send out notification of the session well in advance, to give people enough time to incorporate it into their schedule for that day.
 - If possible, post a notification on bulletin boards in the affected employees' areas.

- **The Classroom**
 - Schedule the room well in advance.
 - Make sure the room can accommodate the expected number of attendees.
 - Check it again on the day of the program to make sure there is no conflict.
 - Make sure the room can be darkened, and won't create a glare on the television screen.
 - Locate the light controls and test them.
 - Make sure the power for the DVD player you are using operates separately from the room light.
 - See if you can control the room temperature.
 - Know where the closest restrooms are located.
 - Assure that the room is free from distracting noises.
 - Make sure emergency exits are marked and known to the attendees.

- **Seating**
 - Make sure everyone can see the screen from their seat.
 - Make sure everyone can hear the DVD and you (when you speak).

- Check to see that seating is such that writing can be done easily.
- Make sure the seating arrangement allows eye contact between attendees, and between you and attendees.
- **Equipment and Materials**
 - Make sure the DVD player, monitor, and all appropriate cables and extension cords are available.
 - Make sure a stand or table is available and is of appropriate height for all attendees to easily see the monitor.
 - If you plan on using a chart pad, blackboard, or other writing board, make sure it is available, easy to see, and you have the proper writing implements.
 - Make sure you have 6" x 8" index cards or other materials to be used as "name tents" for attendees.
 - Make sure you have made up a sufficient number of copies of the "quiz", as well as any other handouts you are using.
- **"Final Check"**
 - Make sure equipment is in the room prior to the scheduled session.
 - Make sure you have the right program, (look inside the three-ring binder).
 - Check to see that the room is set up properly.
 - Check equipment prior to the presentation to assure that it works.
 - Make sure extension cords, etc. are "taped down", if need be, to avoid tripping.

CONDUCTING THE SESSION

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The Initial Steps

In conducting the session remember the positive nature of this presentation. Everyone is attending in order to learn more about how to perform welding operations safely on the job. Initially, you need to:

- Introduce yourself as the session leader.
- State the title of the program, "Welding Safety", and the purpose of the session (to learn to recognize welding hazards and prevent them from causing accidents and injuries).
- Inform the attendees when there will be breaks (if you plan them) the location of exits and restrooms and if water, coffee, or other refreshments will be available.
- Make sure all of the attendees have "signed in" on your scheduling and attendance form. Remember, it is very important to document people's attendance at the session.

Once this housekeeping is done, it is time to move to the "meat" of the session. First, the attendees need to be informed about the objectives of the session (this is where you can use a flip chart or board to list the objectives, which should be done prior to the class starting). This listing should be preceded with some introductory remarks. Your own words are always best, but the remarks should follow along the lines of the following:

"Every day in this country more than half a million workers in various industries perform welding, cutting, brazing and soldering operations. These activities require training and caution because they can be dangerous."

"Welding and cutting operations cause more than fifty deaths and thousands of injuries annually, and can lead to serious health problems."

"To work safely, you need to understand the hazards that are associated with welding, as well as know the work practices and equipment you can use to help keep yourself and your coworkers safe."

"The program we are going to watch today will give us some good information about welding safety. To make this the most productive session possible we need to look at what we want to accomplish here today (verbally reference the 'Objectives' list from the first section in this guide, or point to a white-board or chart where you have written them down)."

Once the objectives have been provided, you are ready to show the program. However, you do need to let the attendees know that they will be taking a quiz at the end of the session (if you are using it). It should be emphasized that they are not being "graded", but that the quiz is being used to determine if the session is effectively transmitting information to them in a way they will remember.

Showing the Program

At this point, you need to introduce the title of the program once again, "Welding Safety", darken the lights if necessary, and begin the showing of the program.

You have several options as to how you can move through the program and what employees see. The DVD menu has three "selection bars":

- "Play".
- "Scene Index".
- "Contact Info".

To just play the program from beginning to end, select "Play".

To view (or review) a specific section of the program, select "Scene Index". You will be presented with a group of buttons, each of which corresponds to a section of the program. You can then select the specific section that you want to view.

If you would like information on other programs and products that are available from MARCOM you can select "Contact Info" for information about how to contact us.

All of our DVDs, both English and Spanish, are subtitled (similar to closed captioning). If there are hearing impaired employees participating in your training session, or you want people to be able to read the program narration as well as hear it, push the "subtitle" button on your DVD player's remote control or the player's control panel. A print version of the narration will then appear on the screen as the program plays.

Conducting the Discussion

After the program has been shown, it is time for the group discussion on the information that it contained. Care must be taken to make sure that the discussion is kept to the general topic of welding safety. There are several ways to conduct this discussion. These include:

- Calling for questions from the attendees and using these questions as the basis for the discussion.
- "Leading" the discussion through the points covered in the program using statements such as:
 - "One of the sections that we saw in the program discussed the hazards that are associated with welding work. Who can name some of these hazards, and describe the effects they can have if we don't control them?"
 - "We saw an interesting sequence discussing the dangers of glare and other radiant energy that is given off by welding. Who can describe these hazards and explain what protective equipment we should wear to shield ourselves from them?"

You should use the discussion format that you are most comfortable with. The "Outline of Major Program Points" section in this guide, and the questions and answers in the master copies of the quiz should be used as a basis for this discussion, as well as the supplemental information that you have presented in this session*.

Remember, you have allocated a limited amount of time in which this discussion can take place. It is important to blend the attendees' questions and areas of interest with the objective of trying to touch on each major area within the program in the discussion. By touching on each area, the attendees are much more likely to retain the information presented in the session.

*(An alternative to this approach is to give the quiz immediately after showing the program, then using a review of the questions as a basis for your group discussion.)

Concluding the Presentation

Once discussion has concluded (whether naturally or you have had to bring the discussion to a close in order to complete the session within the time allowed) it is time to give the quiz if you are using it. Copies of the quiz can be made using the printed "master" in the back of this binder or from the PDF version on the DVD. Again, remind the attendees that the quiz is only meant to help determine how effective the presentation of the information is, and that they will not be graded. Let them know that they have approximately five minutes to complete the quiz.

At the end of the five minute period, remind the attendees to date and sign their quizzes, and then collect them. The attendees should be thanked for attending the session and reminded of any other sessions in the educational program that they may be attending. They can then be dismissed to return to their normal activities.

"Wrapping Up" the Paperwork

Before much time has passed, and the subject matter is fresh in your mind, several areas of "paperwork" must be completed. First, check to make sure that all attendees signed the scheduling and attendance form. Next, make sure that you have a quiz from every attendee, dated and signed.

Depending upon what you have decided to do, a copy of the attendance form and the quiz for each attendee should be either filed in your files, or turned over to the attendee's department manager (or the personnel office) so that this paperwork can be included in their personnel file. The attendees' training logs should also be updated, and every attendee should be given a filled out and signed training certificate, which signifies that they have successfully completed the course. Copies of the employee training log and the training certificate can be made using the printed "master" in the back of this binder or from the PDF version on the DVD.

Remember it is always a good idea to document information about an employee's attendance at these sessions, as well as the fact that the employee has come away from the session with an increased knowledge of welding safety.

OUTLINE OF MAJOR PROGRAM POINTS

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The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- **Every day in this country more than half a million workers in various industries perform welding, cutting, brazing and soldering work as part of their jobs.**
 - These activities require knowledge, skill, and caution, because they can be dangerous.
- **Welders and anyone who works around welding and cutting need to understand the potential hazards that are associated with these activities, so they can protect themselves from them.**
- **Most welding and cutting hazards result from the immense amounts of energy that are involved.**
- **This work is performed at very high temperatures.**
 - Oxy-fuel cutting reaches over 6,000 degrees Fahrenheit.
 - Arc welding can reach over 10,000 degrees.
- **To reach these temperatures, some welding equipment burns oxygen with acetylene, hydrogen or other fuel gases.**
 - These substances can create fire and explosion hazards.
 - They are usually stored in pressurized cylinders, which can also explode.
 - These hazards can result in serious burns and other traumatic injuries.

- **Other welding and cutting equipment uses high-voltage electricity that can create:**
 - A shock hazard, and even result in electrocution.
 - Electric sparks from the equipment can also ignite fires and explosions.

- **Welding and cutting also create dangerous levels of glare, as well as infrared and ultraviolet (UV) radiation.**
 - This "radiant energy" can burn your skin, damage your eyes and cause other health problems.

- **"Welder's flash" is a painful temporary condition that results from looking at a welding flame or arc.**
 - Some eye damage can be permanent and even cause blindness.
 - Over the long term, UV radiation can also lead to cataracts and skin cancer.

- **High-temperature welding operations can cause metals, flux coatings, coverings and other materials to release hazardous fumes as well.**

- **The airborne contaminants generated by heated zinc, lead, beryllium, cadmium, fluorine compounds, mercury and even stainless steel can be especially dangerous.**
 - Limited exposure to them can lead to irritation to the eyes, nose, and throat, and illnesses such as "metal fume fever".
 - Breathing these fumes over many years can result in lung cancer and severe damage to the nervous system.

- **Welding and cutting can be done in many environments, even underwater.**
 - But they can't be performed safely "just anywhere".

- **To control hazards and prevent accidents and injuries, companies create "designated welding areas".**
 - They are isolated from other work areas and have had combustible or flammable materials removed from them.
 - Welding can be performed in these designated areas without other special precautions or the need for permits.

- **But many welding jobs must be done "where the need is", and can't be moved to designated areas.**
 - When welding has to be performed outside of designated areas, fire hazards are controlled through a "hot work permitting system".

- **This system requires a supervisor or other responsible person to inspect the proposed welding site, identify any hazards, and determine what needs to be done to make the area safe for welding activity.**
 - All of this information will be included in the Hot Work Permit that is issued for the job.

- **No welding or cutting will be allowed in a "permit-required" location until all safety requirements have been met, and the responsible person signs off on the permit.**

- **If you are going to be doing welding work, you need to make sure that the location has been authorized by management for welding activity, and that all required safety procedures are being followed, before you begin.**

- **Hot Work Permits are especially important when welding or cutting must be performed in "confined spaces".**
 - These are limited-access structures such as tanks, storage bins, vaults, manholes and tunnels.

- **Working safely in confined spaces is an important subject that OSHA addresses with standards for both general industry and construction.**
 - Confined spaces can contain dangerous machinery, toxic atmospheres, explosive gases and other hazards, and are involved in many worker deaths.
- **Welding in these types of spaces can involve additional hazards, including exceptionally high heat, exposure to high voltage electricity, as well as an increased risk of igniting a fire or explosion.**
 - Before performing welding or cutting in a confined space, you need to understand the special hazards that are involved and how to avoid them.
- **Anything that can burn, such as wood, paper or vapors from paints, solvents or other chemicals, is a potential a fire hazard if it is present where welding or cutting is being done.**
- **Wherever you weld, the area must be made "fire-safe" before you light a torch or strike an arc. To do this you should:**
 - Remove flammable materials from the location.
 - Or protect them from ignition sources, such as flying sparks.
- **High heat can start fires and even cause aerosol cans to rupture, but sparks are the main cause of welding-related fires and explosions.**
 - Sparks can fly a long distance, so when you are removing fire hazards from the area, you should use the "35-foot rule".
- **Combustible and flammable materials should be moved at least 35 feet away from where welding or cutting will take place.**
 - Any dust or litter that may be lying on the floor should be swept at least 35 feet away as well.

- **Any flammable or combustible materials that cannot be removed should be protected by welding screens and curtains, or "fire blankets" made of heat-resistant material.**
- **Screens and curtains can also protect other people who are in the area from welding glare and radiant energy hazards.**
 - You need to position these shields so they don't interfere with the air flow in the area.
- **One combustible material that can't be moved is a wooden floor.**
 - If there's one in your welding area, wet it down with water or cover it with damp sand or heat-resistant blankets before you begin to do your welding.
- **Fire prevention measures are important, but you also need to be prepared to deal with any fires that do start.**
 - Make sure you always have a fully-charged fire extinguisher handy, and post a "fire watch".
- **Fire watchers keep an eye out for any fire hazards, such as sparks, that get past your safety precautions.**
 - "Watchers" are trained to extinguish small fires.
 - They will also sound the alarm if a fire becomes too big to deal with single-handedly.
- **Fires don't always flare up right away, so the fire watcher should stay on duty for at least a half an hour after welding operations are finished.**
- **Welding and other hot work can release a number of types of hazardous fumes.**
 - Inhaling these airborne contaminants can often cause what is called "plume poisoning".
 - It's a health threat that you need to take very seriously.

- **If you ever accidentally inhale welding fumes:**
 - Move away from the "plume" immediately.
 - Go to where you can breathe fresh air.
 - Then call for medical assistance.

- **Plume poisoning can be prevented by using natural or mechanical ventilation to circulate fresh air through the welding area.**
 - You can create natural ventilation by opening doors or windows.

- **According to OSHA, natural ventilation will keep contaminants in the air at safe levels whenever:**
 - The work area contains at least 10,000 cubic feet of air per welder.
 - The ceiling is at least 16 feet high.
 - Curtains, screens or other barriers do not block air circulation.
 - The welding area is not in a "confined space".

- **Otherwise, OSHA requires that mechanical ventilation be used.**
 - This can include fans arranged around the work area, local air exhaust hoods or a building's HVAC system.

- **In some situations, even mechanical ventilation may not be able to reduce the airborne hazards to safe levels.**
 - Then you'll need to wear some type of "respirator" to remove contaminants from the air you breathe.

- **Any respirator that you plan to wear in a hazardous environment must be "fit tested" before you use it.**
 - This procedure ensures that it can keep bad air out and good air in.

- **Air-purifying respirators are the most commonly used respirators in welding situations.**
 - They can have various types of filters, each of which traps specific contaminants.
- **If your respirator uses filters, make sure that they are designed for the specific contaminants that are released by the type of welding you'll be doing.**
 - Wearing the wrong type of filter can be as dangerous as wearing no respirator at all.
 - Your supervisor can tell you what the right filters are for your job.
- **Respirators are just one type of personal protective equipment you will need to guard against welding hazards. You should also use:**
 - Goggles, helmets or hand-held shields.
 - Gloves, heat-resistant clothing and safety shoes.
- **Goggles keep sparks and slag from getting into your eyes.**
 - Helmets and "hand shields" can also protect your head and face from them.
 - A hand shield can provide similar protection to a helmet, but is held in front of the face by a handle.
- **Because they are equipped with specially tinted lenses and optical filters, goggles, helmets and hand shields will also protect your eyes from glare and infrared as well as ultraviolet radiation.**
 - They can prevent the skin of your face, neck and ears from being burned by this radiant energy too.
- **But different types of welding will expose you to different types and amounts of radiant energy.**
 - Goggles that provide good protection against the glare of oxyacetylene welding will not protect you from the more intense radiant energy of electrical welding.

- **Arc, MIG and TIG welding require you to wear a welding helmet or use a hand-held shield that is equipped with lenses that can handle greater infrared and ultraviolet radiation.**
- **The protective lenses that are made for different types of welding are identified by "shade numbers", to help you choose the right ones.**
- **When you're using a welding helmet or hand shield, it's also a good idea to wear a fire-resistant head covering under them.**
 - Wearing safety glasses will provide an extra margin of safety from both sparks and flying particles as well.
- **Remember that the radiant energy produced by welding also creates a hazard to people who are working nearby.**
 - You can help protect them by arranging welding screens or curtains around your work.
 - Make a habit of warning everyone in the area before you light your torch or strike an arc.
 - In some cases, you may need to arrange for coworkers to wear eye protection themselves.
- **Before you get "hands on" with any type of welding or cutting work, you're going to need a good, strong pair of leather gloves.**
 - Welding produces a lot of heat, so you should assume that work surfaces, clamps, pliers and other tools will get too hot to touch with your bare hands.
- **Welding gloves are built to handle these extreme temperatures.**
 - Many have extra leather sewn into the fingers and palms for additional protection.
 - Some have extended "cuffs" to protect your forearms.

- **Even with protective gloves, if you try to hold heated metal itself, it will probably burn right through them.**
 - You need to use pliers, clamps or other tools to handle this type of material.
- **Check your gloves for tears, holes or other damage before putting them on.**
 - If you find problems, don't wear them.
 - Be prepared to replace them regularly.
- **To shield the other parts of your body from heat, radiation, sparks and molten spatter, you should wear:**
 - High-topped boots, fully laced and tied.
 - Long pants, pulled down to cover the boot-tops.
 - A long-sleeved shirt buttoned at the neck and wrists.
- **Make sure the clothing you wear while welding is flame-resistant.**
- **For even more protection, you can wear a welding jacket or apron, and sleeves and leggings that are made of leather or other heat-resistant materials.**
 - You can even get protective coverings for your shoes.
- **Welding can be noisy work, and you often need to do it in noisy places.**
 - You can protect yourself against excessive noise with ear protection.
 - Ear plugs, ear muffs and canal caps can prevent sparks and welding debris from getting into your ear canals as well.
- **When you perform welding or cutting tasks on scaffolds, platforms or other elevated locations, you should also wear personal fall protection.**
 - If you have any questions about the types of PPE you need for a particular job, ask your supervisor.

*** * * SUMMARY * * ***

- **Welding hazards include:**
 - Very high temperatures.
 - Intense light and radiant energy.
 - Hazardous fumes.
 - Electric shock.
- **Welding and cutting should only be performed in authorized areas.**
- **Flammable and combustible materials should either be removed from welding areas or be protected from heat, sparks and other sources of ignition.**
- **You can reduce toxic fumes and other air contaminants to safe levels by using natural or mechanical ventilation.**
- **You should wear appropriate PPE to protect yourself from welding hazards.**
- **You'll always need to be "safety conscious" when you're doing hot work. But now that you understand its hazards as well as how to avoid them, you can help make sure that you go home safe at the end of every day!**

ACCOMPANYING MATERIALS

ACCOMPANYING MATERIALS

In order to assist you in conducting your session on welding safety, we have provided a number of specific materials that can be used with this program. These materials have been furnished in PDF format on the DVD as well as printed "masters" in the back pocket of this binder. This will enable you to make as many copies of these forms as you need. If you have colored paper available to you, it is often useful to put each form on a different color. This enables you to easily differentiate between the materials. The materials enclosed with this guide include:

Scheduling and Attendance Form

This form is provided so you can easily schedule your attendees into each session of the program. It's important that you have each attendee "sign-in" on the appropriate form, documenting their attendance at the session. Typically, a copy of this attendance/"sign-in" form is filed in the employee's personnel file.

Quiz

The quiz is normally given after viewing the program. However, if you would like an indication of the "increase" in the attendees' knowledge of welding safety, you can give the quiz both before and after the program is shown. You can also use the quiz as the basis for a class discussion. If you have decided to give the quiz both before and after the attendees view the program, it is often interesting to have the attendees compare their "before" and "after" answers as part of the session. Typically, the quiz is filed in the employee's personnel file.

Training Certificate

This form allows you to give each employee their very own "certificate of completion", showing that they have attended the course and taken the quiz. Space is provided to insert the employee's name, the course instructor and the date of completion.

Employee Training Log

This log helps you to keep track of when each employee has taken the course, as well as associated courses/training. Space is provided to list pertinent data about the employee, as well as information such as the date the course was taken, and the instructor conducting the course. A copy of this form should be kept in each employee's training or personnel file.

Booklet*

A sample copy of the employee booklet that has been designed for use with this program has also been included. Using both illustrations and text to review important points, the booklet is designed to reinforce the message that employees receive in the training session. The material is presented in the same order as seen in the program and is organized into concise sections, making it easy to understand and remember.

**Additional booklets, as well as copies of the poster that has been created to get employees thinking about welding safety, are available from your distributor.*