



## Kansas Vocational Rehabilitation Services JOB SAFETY ANALYSIS

Job Safety Analysis (JSA) is a procedure for making a job or operation safer by identifying the hazards and potential accidents associated with each step in the job. JSA will help develop proper and safe job procedures for each step to eliminate, reduce or control the hazards.

### USES AND BENEFITS OF JSA

The completed JSA provides a listing of the basic steps of the job and proper, safe procedures for completing each step.

The completed JSA can provide the following benefits:

- Standardized training through documented, step by step job procedures. Safer working conditions are developed.
- Improved and refined job procedures through review and experienced employees utilizing their expertise and experience. This will improve their safety attitude and increase their safety knowledge.
- A source for review of established job procedures during accident investigations. Subject matter for informal departmental "toolbox" safety meetings.

### HOW TO PERFORM A JSA

#### Select the Job

Select jobs with the worst accident experience, a severe injury potential or new jobs or processes for which the hazards have not yet been analyzed.

#### Break the Job Down

Break the job down into its basic steps listing them in the order they are performed. This can be done by observing the job directly and/or by asking experienced workers and foremen to list the sequence of steps.

#### Identify the Hazards/Exposures

This is a critical step as only identified hazards/exposures can be acted upon. For each job step, list the hazard(s) or potential accident(s) that could occur as a result of performing that step. Be thorough in identifying all hazards/exposures. Do not overlook potential environmental hazards, i.e. weather, welding fumes, etc.

#### Develop Safe procedures

For each hazard or potential accident, develop a recommended safe job procedure for eliminating, reducing or controlling that hazard while performing the job step in the most efficient manner possible.

#### Document Review

Remember that the intent of this process is to eliminate or reduce losses. If an analysis of the loss data does not substantiate this, then the JSA should be reviewed for error and/or the process performed again. Even if accidents do not occur, review the procedures periodically to ensure continuance of understanding and application.

**Kansas Vocational Rehabilitation Services  
JOB SAFETY ANALYSIS**

Business Name:	John's Metal Fabrication	Page:	1 of 2
Job Title:	Grinders/Laborers	Analyzed by:	J. Jingleheimer
Supervisor:	J. Schmidt	Date:	09/10/2021
Required PPE:	Full-face shield, polarized safety sunglasses, hard hat, gloves, and hearing protection.	Reviewed by:	R. Stylskin
		Date:	09/13/2021
Required Physical Safeguards:	Appropriate work clothing, correct type of abrasive disk for given portable power grinder.	Approved by:	
		Date:	
Required Operational Changes:	None	Approved by:	
		Date:	
<b>Sequence of Job Steps</b>	<b>Potential Hazards</b>	<b>Safe Job Procedure</b>	
1. Determine power source and type of portable power hand tool to be used, I.E.: electric or pneumatic.	1. Electrical shock, contact with high-pressure air streams or flying hose lines.	1. Check power source and cords for fray, grounded plug ends, CGCI (ground fault circuit interrupters), worn or defective connectors, air hose safety wire, grounded pipe sections, etc. Test CGCI before grinding.	
2. Position grinding team several feet behind tack rig and forward of firing line (welders).	2. Congestion, bottleneck of workers, tools, and equipment.	2. Organize gang and firing line workers, tools, equipment, vehicles, etc. before commencing operations.	
3. Observe tack welding operations (welding of first stringer bead by pipe gang.)	3. ARC flash, sparks.	3. Don't look directly at welding operations. Be aware of what's going on. Wear safety sunglasses with polarized lenses.	
4. Move up along side of tacking rig underneath sun canopy.	4. Tripping over power cords or air hoses, being struck by or striking against tack rig, pipe, workers, and equipment.	4. Watch where you're going. Tape power cords together to keep them from tangling. Wait for tack rig to stop before commencing grinding operations.	
5. Grab hold of portable power grinder.	5. Dropping tool on feet.	5. Grasp hold of tool with both hands with firm grip.	

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Sequence of Job Steps	Potential Hazards	Safe Job Procedure	
6. Grind stringer weld to remove excess, bead, slag for the next hot pass weld.	6. Foreign particles in eye from flying sparks or metal.	6. Flip down full-face shield over safety sunglasses before commencing grinding operations.	
7. Grinding stringer weld around pipe – two-person grinding operation.	7. Spraying each other with sparks or metal particles, or striking one another with the grinding disk.	7. Position self opposite team member. Operate grinder to direct flying sparks down and away from face. Begin grinding 180 degrees opposite partner and proceed around in the same clockwise or counter-clockwise direction that you both agreed upon beforehand. Find out if your partner is left- or right-handed before beginning work.	
8. Finish grinding (last 10 to 20 seconds).	8. Contact with moving disk/grinding wheels – cuts and lacerations.	8. Allow grinding wheel to stop before lowering tool away from the grinding zone. Always keep tool away from your body.	
9. Place tool on top of pipe.	9. Dropping or pulling tool off pipe onto feet. Damaging epoxy finish of pipe. Damaging tool.	9. Set tool down gently. Avoid tangling feet, arms, and legs in power cords or hoses.	
10. Rest during welding time: about two minutes.	10. Being struck by firing line equipment/tools. Creating congestion on the work line.	10. Be aware of your surroundings and the work activities of others. Don't create delays. Stringer and hot welds must be completed within 5-minutes to avoid cracking.	
11. Start over with number 2, above.	11. Repetitive motion disorder/carpel tunnel syndrome.	11. Trade off with third team member after 10 grinding jobs.	