SAFE JOB PROCEDURE **SJP-29**

March 11, 2010 **Tie-In Welding (Pipeline)**

PURPOSE/APPLICATION:

Tie-in welding is a necessary procedure when building a Pipeline. Tie-in points are where two joints of pipe are welded together to complete a pipeline. Generally Tie-in's are completed in a ditch or Bell Hole. Tie-in welds may also occur above ground as well.

PPE
- Safety Glasses
- Face shield/welders mask
- Welding Gloves
- Fire Retardant Clothing
- Personal Gas Monitor

TRAINING
- Certifications
- Orientation
- Training

TOOLS/EQUIPMENT
- Side Boom/Crane
- Cutting Torch
- Grinders
- Line-Up Clamps
- Ladders
- Slings
- Pipeline Skids
- Pipe Beveller
- Tiger Torch
- Propane

#	Job Steps	Hazards	Control Measures
1	Set pipe in ditch for tie-in weld using Side Boom or Crane	▪ Suspended loads ▪ Mechanical Failure ▪ Sling Failure	▪ Never work under a suspended load ▪ Equipment Inspections ▪ Use Tag Lines
2	Set pipe on Pipeline Skids or cones in ditch	▪ Pinch Points ▪ Confined space ▪ Improper Rigging	▪ Ensure Cones or skids are on level ground and sturdy ▪ Competent persons rigging pipe

#	Job Steps	Hazards	Control Measures
3	Mark pipe and use beveller or torch to cut to size	▪ Burns ▪ Explosion/Fire Hazard ▪ Explosive Atmosphere	▪ Monitor Atmosphere at all times ▪ Ensure Fire Extinguisher is present ▪ Wear all required PPE at all times ▪ Ensure pipe is supported by skids or mechanical means on each side of the tie-in point before cutting pipe
4	Pre-heat pipe as per requirements with Tiger Torch	▪ Burns	▪ Never place propane bottles in ditch ▪ Use Temperature Sticks or a Heat Probe to determine required temperature
5	Attach Line-Up Clamps on pipe for alignment	▪ Pinch points	▪ Ensure right tools for the job ▪ Never place hands in ends of pipe
6	Tack Weld joints together in preparation for completion weld	▪ Arc flash ▪ Spark spray ▪ Stored Energy	▪ Wear PPE ▪ Restrict access to area to prevent congestion ▪ Rotate Line-Up Clamps when necessary to achieve sufficient tack before removing clamps (50%)
7	Remove Line-Up Clamps and finish welding joint	▪ Heavy lifting	▪ Get help for lifting heavy objects ▪ Use your legs not your back while lifting heavy objects

Additional Precautions:

REFERENCE/REGULATIONS

- Alberta OH&S Code
  - Part 2 Hazard Assessment, Elimination And Control
  - Part 6 Cranes, Hoists And Lifting Devices
  - Part 10 Fire And Explosion Hazards
  - Part 14 Lifting And Handling Loads
  - Part 18 Personal Protective Equipment
  - Part 19 Powered Mobile Equipment
- Saskatchewan OH&S Regulations
  - Part 3 General Duties
  - Part 7 Personal Protective Equipment
  - Part 11 Powered Mobile Equipment
  - Part 13 Hoists, Cranes And Lifting devices
  - Part 14 Rigging
  - Part 25 Fire And Explosion Hazards
- British Columbia OH&S Regulations
  - Part 4 General Conditions
  - Part 8 Personal Protective Clothing And Equipment
  - Part 14 Cranes And Hoists
- Part 15 Rigging

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