



## 2013 Provincial Skills Competition

### Scope Document

<b>Event:</b> Steamfitter/Pipefitter	<b>International Trade:</b> 15	<b>LEVEL:</b> Post-Secondary (PS)
<b>Numbers of Competitors:</b> 6	<b>Competition Location:</b> UA Pipe Trades Training Center 334 Robin Way, Saskatoon SK	
<b>Competition Date:</b> April 26, 2013		
<b>Competition Duration:</b> 8 hours		
COMPETITION SCHEDULE		
ACTIVITY	TIME	LOCATION
Orientation	7:30 AM to 8:00 AM	Classroom 1
Theory Exam	8:00 AM to 9:00 AM	Classroom 2
Break	9:00 AM to 9:15 AM	Classroom 1
Competition	9:15 AM to 11:30 AM	Piping Shop
Lunch	11:30 AM to 12:30 PM	Classroom 1
Competition	12:30 PM to 2:30 PM	Piping Shop
Break	2:30 PM to 2:45 PM	Classroom 1
Competition	2:45 PM to 3:30 PM	Piping Shop
Clean-Up	3:30 PM to 4:00 PM	Piping Shop (individual area)
POST COMPETITION SCHEDULE		
Competition Judging	4:00 PM to 5:30 PM	Boardroom (judges only)
Banquet, Closing Ceremonies, Medal Presentations	6:00 PM to TBD	SIAST Kelsey Campus Idylwyld & 33 <sup>rd</sup> Saskatoon SK

### **PURPOSE OF THE CHALLENGE**

To assess the Competitors knowledge and skills of the Steamfitter/Pipefitter Trade with a high regard to the aspects of safety, quality of workmanship, proficiency of pipe jointing techniques, and accuracy of work within a specified time frame.



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### **SKILLS AND KNOWLEDGE TO BE TESTED**

- 100 question theory exam; tools, materials, jointing methods, blueprint reading, rigging, safety , Hydronic heating, Steam Systems, Process Piping Systems
- Interpretation and application of blueprints, detail drawings and project specifications
- Application of mathematical and practical concepts involving parallel equal spread offsets for 45 degree, 22 ½ degree configurations, fitting deductions for copper, PVC, malleable iron, weld fittings, socket weld fittings and flanges, Saddle-tee layout, y-lateral layout, piping elevations, equipment setting, pipe fabrication, pipe rigging.
- Proper jointing of threaded, welded, soft soldered, hard soldered, flanged, socket, transition fit-ups. Bending of soft copper and stainless steel tubing using Swagelok mechanical type benders
- Application of safe work practices and proper piping practices

### **SKILLS ASSESSMENT/POINT AWARDS**

<b>POINT BREAKDOWN/1600 POINTS</b>	
<b>MARKING CATEGORIES</b>	<b>POSSIBLE POINTS</b>
Safe work practices	400
Quality of workmanship	400
Accuracy of installation	400
Air/water Test	400
<b>ADDITIONAL MARKING NOTES</b>	
➤ Full marks for dimensions within 2 mm of drawing measurement	
➤ 20 point deduction for each measurement over 3mm	
➤ 25 point deduction for each deviation from competition drawings and specifications	
➤ 50 point deduction for each safety related/unsafe work practice	
➤ Point deduction of 10 points per extra material request	
➤ Ties will be decided by the actual completion time of the Competitors	
➤ All decisions by the Competition Judges are final	
➤ Contestants will not be given specific final scores	
➤ Contestants will be provided an overall ranking based on points awarded	
➤ There shall be no sanding/wiping of hot copper soldered joints. A clean wet cloth may be used after the solder has solidified and cooled to remove excess flux.	



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### **CLOTHING AND PPE REQUIREMENTS:** (COMPETITOR MUST SUPPLY)

Contestants must wear the appropriate long sleeved clothing and approved personal protective equipment; CSA approved safety boots, safety glasses (worn at all times), side shields for prescription glasses, hearing protection and work gloves (for hot work). The contestant must address the dangers of long hair, jewelry, etc.

Jewelry such as rings, necklaces, bracelets, or any item deemed unsafe by competition judges shall be removed. Competition Judges shall have final authority on all matters of safety.

### **COMPETITION SAFETY RULES AND REQUIREMENTS**

- PPE must be worn in the Competition Area at all times.
- There will be no tolerance for horseplay, alcohol/drug use, practical jokes
- Work to be done in accordance with all safety rules and industry best practices
- All safety concerns shall be immediately reported to the Competition Judge(s)
- Tools and equipment shall be used only for their intended purpose
- Each Competitor shall be responsible for maintaining a clean work area while the Competition is going on
- Each Competitor shall be responsible to clean work area upon completion of their project(s)

### **COMPETITION DISCIPLINARY ACTION**

- Competitors found willfully and knowingly in violation of health and safety rules will be removed from the competition
- Competitors found in violation of health and safety rules without willful knowledge will face the following:
  1. First infraction-verbal warning
  2. Second infraction-written warning
  3. Third infraction-removal from competition

**All infractions will be documented and recorded**



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### TOOLS, EQUIPMENT, AND MATERIALS

SUPPLIED BY THE COMMITTEE	SUPPLIED BY THE COMPETITOR
Acetylene B tank, torch and striker	Pocket calculator
Oxygen/Acetylene Cutting torch	
Pipe threader (hand and Ridgid 300 power vise, oiler/oil will be available)	Measuring tape in millimeters & standard (1" wide recommended)
Tripod, work bench, bench vise	Steel meter stick with accurate measurement (recommended)
Drill bits as required combination wrench set (3/8 to 1 1/4)	10 inch channel lock pliers
Teflon tape, solder paste(s), adhesives, acid brushes, pipe joint compound, sand cloth, wiping rags	9 inch and 24 inch levels
Silver solder (Bcup-5)	8 inch vice grips
95-5 solder or Silverbrite	16 oz. ball peen hammer
all thread rod shear tools/rod	flange pins (optional)
1/2 round steel file hacksaw with spare blades	Plumb bob with string
copper, steel, SS	assorted flat head screwdrivers
Cordless drill/batteries	Number 8 Robinson screw driver
18/24 inch pipe wrenches	Tube/tubing cutters for 1/2" to 3/4" diameter copper pipe Ridgid #101 mini pipe cutter or equivalent
2 foot square Assorted adjustable wrenches (8 inch and 12 inch recommended)	Wrap-a-round (optional)
Oxy/acetylene torch	Ridgid 12 inch pipe wrench
Mechanical tube/tubing benders	Ridgid 14-inch pipe wrench
Tube/tubing Deburring tool	No project specific aids, jigs, or un-approved tools will be allowed in the competition area
➤ Full face shield	
➤ ear plugs, Clean up stations	
➤ Pencils/paper	



## 2013 Provincial Skills Competition

PROVINCIAL TECHNICAL COMMITTEE MEMBERS			
Name	Position	Email	Phone Number
Ken Busch	Chairman	ken.skppin@sasktel.net	(306)-651-3737
Chris Henricksen	Member	chris.skppin@sasktel.net	(306)-651-3737

### **ADDITIONAL INFORMATION**

- Skills Saskatchewan has a web site that provides additional information for each Competitor. Please follow the link below.

<http://skillscanadasask.com/>

### **LUNCH AND BREAKS**

- Lunch for registered Competitors will be provided. Each Competitor must ensure they clean up after themselves.
- Bottled water, fresh fruit and protein snacks shall be supplied during competition and lunch and breaks

### **PARKING AND VENUE MAP**

- Parking space is provided. Facility map will be provided

### **SPECTATOR VIEWING AREA**

- There is limited seating capacity Employers, family, friends etc. There shall be no communication between any spectator and any Competitor during the Competition.
- No spectator shall be allowed into the lunch, break area, or test areas

### **AWARDS CEREMONY**

- It is encouraged that all competitors, employers, family and friends etc. attend the awards ceremony
- Awards ceremony times to be announced

### **ADVANCEMENT TO NATIONAL SKILLS COMPETITIONS**

The winner of this competition will advance to the National Skills Competition held in Vancouver June 5 to 8, 2013