



SkillFRIDGE Competition Safety File

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For: **Worldskills LIVE show** at the NEC

Date/s: 18-23 November 2019

Revision 1.0 dated 29 September 2019 by Mark Forsyth



Introduction

The host site management will be aware of the work and tasks being carried out during the competition and how the risks identified are to be managed by the issuing of this safety file. The competition / event organiser known as SkillFRIDGE, is aware of its duty under legislation to undertake a suitable and sufficient risk assessment in order to identify hazards that require control measures in order to eliminate the risk of harm to persons.

Before any risks can be eliminated or controlled, hazards are first identified. Based on knowledge of the activities the severity of those hazards to materialise is assessed on a scale from a minor injury to a major injury. A decision is then made on the likelihood of those hazards actually occurring ranging from unlikely to certain.

The next stage in completing the assessment is to multiply the severity by the likelihood to obtain a risk rating. A risk matrix table is used; see attached, and with severity and likelihood allocated a number so that a final rating score can be obtained. A competent person with detailed knowledge of the activities will undertake the risk assessments.

From this final rating score the actions required can be determined. The maximum score would be 20 and would indicate a high degree of risk where a major injury is almost certain to occur and the action would be to stop work immediately. The minimum scores of either 4 or 6 would indicate only a trivial risk and therefore no further action would be required.

Where risks have been assessed as unacceptable then the attached form FAR1 will be completed and work initiated to have further controls introduced and the risk re assessed.

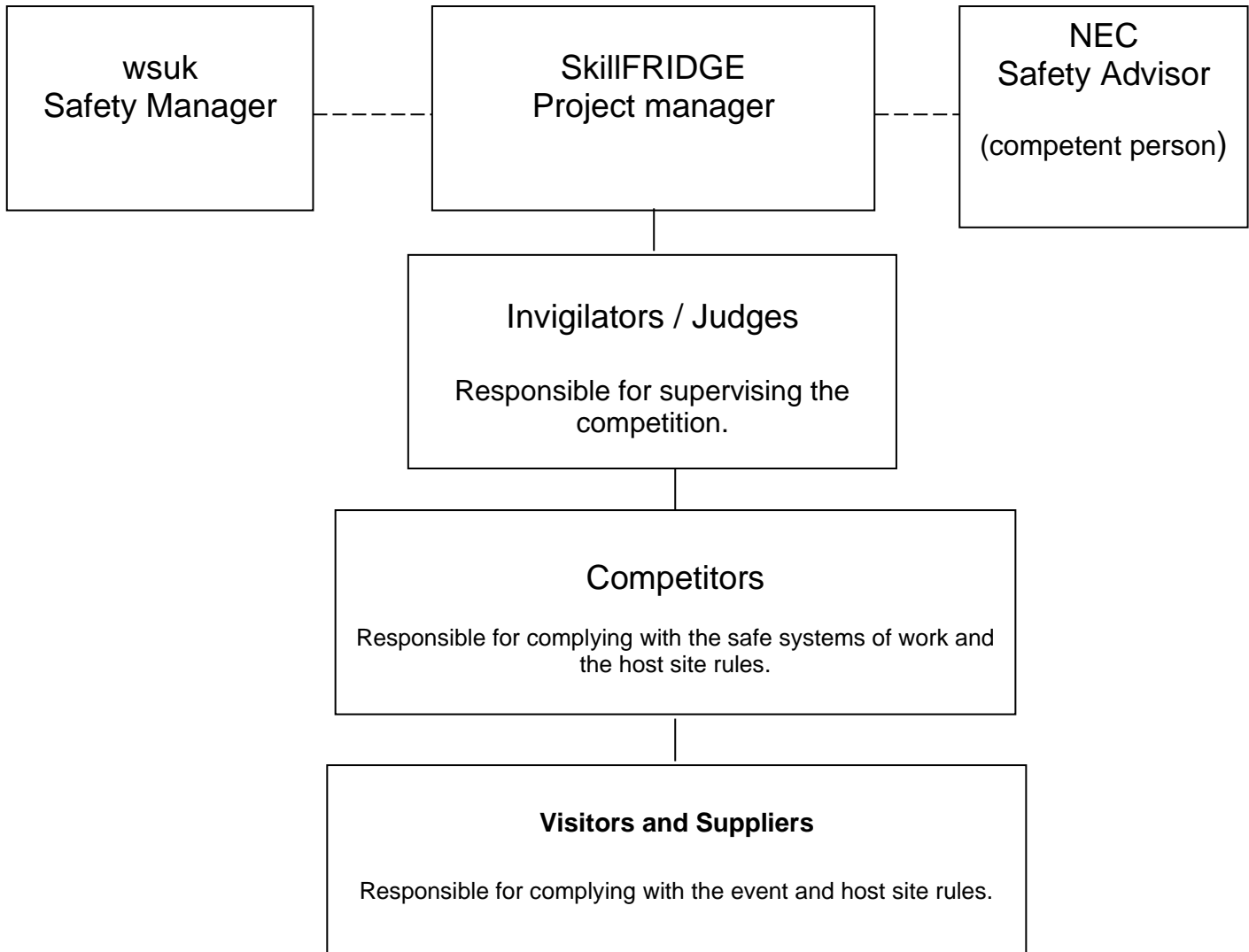
Method statements and risk assessments shall be issued to all relevant parties including company personnel attending the event.

All participants will be required to have an induction and will be made aware of the risks and the controls measures required. They will also be made aware of the host site rules in terms of security, fire / emergency procedures and first aid facilities.

All competitors taking part in the competition will be required to sign all relevant Health and Safety paperwork prior to start of competition and at all times whilst at the competition venue, wear required PPE, and wear the provided identification badges.

Visitors / Public will not be permitted access to competition work bays or judges area, until after, all competition work is completed, judged and work area is tidy, tools and materials cleared away and no hazards remain.

Competition Organisational Safety Structure



Contact Details:

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Worldskills UK LIVE Health & Safety Manager:

NEC safety Advisor :

Risk Rating Matrix

Risk Rating Table				
Likelihood		Severity		
		Minor injury 2	Significant injury 3	Major injury 4
	Certain 5	Moderate risk	Substantial risk	Intolerable risk
	Likely 4	Tolerable risk	Moderate risk	Substantial risk
	May happen 3	Trivial risk	Tolerable risk	Moderate risk
	Unlikely 2	Trivial risk	Trivial risk	Tolerable risk

Rating	Actions Required
20	INTOLERABLE: stop work immediately until risk is reduced
15-16	SUBSTANTIAL: urgent action to reduce risk
10-12	MODERATE: reduce to a tolerable level but measure costs
8 - 9	TOLERABLE: acceptable risk, but keep under revision
4 - 6	TRIVIAL: no action required



Method Statement for Refrigeration Competition

Location: NEC Worldskills LIVE show	Organiser: SkillFRIDGE Dates: 18-23 November 2019
<p>Brief description of the practical tasks: Maximum 8 persons known as competitors will be each given instructions to carry out a series of project tasks involving;</p> <ul style="list-style-type: none"> • Fabrication joining materials & flame brazing • Electrical installation, testing & fault find • Pressure testing and evacuation • Refrigerant handling • Commissioning • Work organisation & safe working practice <p>A timetable is provided detailing 4 x 3hr tasks amounting to a 6 hour competition workday (12 hour total). The work will include the activities shown below and be supervised by trade competent persons who have received induction to the competition area. A safe working environment will be maintained by constantly monitoring, from a minimum of 4 judges and additionally at times by suppliers of specialist equipment.</p>	
<p>1. Bending/forming, fabrication, cutting, flaring and swaging pipe work: All pipe work will be fabricated using hand pipe benders, cut using a rota-cutter and flared using manipulated flare/swage block tools.</p>	
<p>2. Installing pipe work: 5/8 OD pipework is to be fixed onto brackets at 2mtr height above ground level. A work platform will be provided to enable short term access. There will be no use of ladders.</p>	
<p>3. Manual Handling: Tools and equipment to be moved using correct methods. The test rigs are on wheels and require 2 people to manoeuvre. Where refrigerant cylinders are moved (10kg) they are to be lifted as instructed during induction. There will be no significant manual handling requirements for competition competitors or staff.</p>	
<p>4. Electrical circuit testing: This will carried out under direct supervision of a judge. Only hand tools are used and no live working is undertaken by competitors. All test meters have been test run by judges prior to use.</p>	
<p>5. Electrical circuits will have been safely isolated and witnessed by an appointed judge. The installation will be tested for earth continuity, short circuit and neutral circuit integrity without the presence of any potential difference. 240v AC power will be energised after judges have witnessed the electrical tests for earth continuity and earth insulation test.</p>	
<p>6 Flame Brazing: Each competitor will be supplied with an OxyTurbo 1000 set that weighs no more than 5kg in total including the oxygen and maxigas cylinders. We may also use a hand held blow torch using MAPP gas, all of which will be employed to braze pipe work up to 5/8" refrigeration pipe size. Brazing will be undertaken in well ventilated areas, this will be either though natural ventilation. All competitors will be required to wear safety glasses, coveralls and leather/suede gloves. Water buckets and wet rags will be available. Fire extinguishers will be close at hand. Judges will be in close supervision at all times during this activity.</p>	

<p>7a. Compressed gases Dissolved Acetylene: Cylinders will be secured on trolleys and positioned according to the area layout diagram. All cylinder regulators, flash back arrestors, hose lines and mixing chambers will be assembled by judges. A leak test is to be carried out by nominated person prior to equipment being used each day. Lines to be cleared at the end of each day by competitors and checked by the nominated person. ACETYLENE CYLINDERS NOT IN USE</p>
<p>7b. Compressed gases Oxygen and Maxigas: maximum cylinder size is 930ml will be secured on a carriage rack/stand and positioned on the work bench. The equipment has built in regulators. All equipment will be assembled by the competition delivery team appointed person. A leak test is to be carried out by nominated person prior to equipment being used each day. Lines to be cleared at the end of each day by competitors and checked by the nominated person.</p>
<p>8. Compressed gas Nitrogen: will be used for pressure testing system pipework. Nitrogen cylinders will be fitted with pressure regulators and flow regulators and each cylinder secured to a workbench in the upright position according to the area layout diagram. All pressure testing process to be carried out in accordance with current BSEN 378 standards and observed by judges.</p>
<p>9. Refrigerant 134a and/or 513A (1kg max) addition and removal from system: All competitors and judges are trained and certificated in refrigerant handling Fgas 2079 category 1. Refrigerant cylinders will be positioned upright and located according to the area layout diagram. The clean (empty refrigerant receiver cylinder is only used for recovery activity.</p>
<p>10. Set up and Commissioning systems: All work done in accordance with current standards and safe working practices and no electrical live work will be performed. Under prior approval and close supervision by nominated person – measuring 240v AC voltage and 4amp current draw will be carried out.</p>
<p>11. De Commissioning systems: Removal of refrigerant (1kg max) is to be observed by judges. Recovered refrigerant will be secured in receiver cylinders, recorded according to EC regulations, positioned according to the area layout diagram ready for collection by supplier and return to licensed site. No oil waste is expected.</p>
<p>12. Waste: General waste will be paced into local waste bin liners and removed in accordance with the site owner's procedures.</p>
<p>13. First aid facilities: eye wash bottle and first aid box will located within the judges area. Local first aid is available on site.</p>

