Safe Work in Confined Spaces – The GB Experience

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Background

Definitions

- What is a confined space?
- What is a “Specified Risk”?

What is a confined space?

Any place, including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or other such similar place in which by its **enclosed** nature there arises a **reasonably foreseeable specified risk**

What is a Specified Risk?

1. Injuries from fire or explosion (already present or introduced by work activity)
2. Loss of consciousness due to rise in body temperature
3. Inhalation of gas, fume, vapour or a lack of oxygen
4. Drowning in fluid (increase level of liquid or from collapse)
5. Asphyxiation or entrapment in free flowing solid eg flour, sugar or grain

Legislation - Confined Spaces

- The Management of Health and Safety at Work Regulations, 1999 requires a "suitable and sufficient" risk assessment for all work activities.
- For work in "confined space", the risk assessment should consider:
  - Whether the task can be done without entry into the space
  - Task
  - Working environment
  - Working materials and tools
  - Suitability of personnel carrying out task
  - Arrangement for emergency rescue

Legislation - Confined Spaces

- Where the Confined Spaces Regulations apply, the main duty is to
  - Avoid entry to confined spaces (CS), unless it is not reasonably practicable.
    - Consider remote working (Reg 4)
    - Can the work be done from outside the confined space
- If a worker must enter, assess risk and follow Safe System of Work
  - Take into account individual competence, capability and training needs
  - Workers at risk - consulted, informed, instructed and supervised.
  - Make adequate emergency arrangements

Risk Assessment - Consider

- Pre-entry checks, oxygen deficiency (and enrichment), toxic/flammable gases, ventilation
- Physical dimensions
- Conditions outside the space – eg methane from landfill, rising water
- Safe working methods, safe access/ egress (manhole?), hazards from the work (gases, electrical shock)
- Methods of communications – check they work!!
- Emergency arrangements – public fire and rescue service not sufficient! (Regulation 5 CSR 97)

Safe System of Work

Key elements:

- **Supervision**
- **Control Access – systems/signs**
- **Ensure workers competent**
- **Communication effective**
- **Test atmosphere – fit to breathe, flammable gases**
- **Ventilation**
- **Provision of suitable RPE (including Breathing Apparatus)**
- **Check size of the entrance**
- **Provide special tools and lighting**

Permit to work may be part of SSOW.

Enforcement Issues

Despite the Regulations being in place there remain several issues that need to be tackled.

- Failure to have or communicate a safe system of work.
- Failure to have and enforce a permit to work programme for any CS work that is not low risk.
- Failure to properly identify a CS either because there is an insufficient risk assessment, due to lack of training or understanding or deliberately doing so to avoid the need to provide emergency precautions
- Failure to adequately train staff for the various types of CS and the risks they hold, and using the wrong person for the task.

Reported Injuries to Workers involving Asphyxiation

Year	Fatal Injuries	Major Injuries (non fatal)	Over 3 day injuries	Total
2001/02	3	7	12	22
02/03	2	*	*	6
03/04	1	7	*	8
04/05	4	3	*	8
05/06	2	*	3	7
06/07	4	*	*	8
07/08	1	6	*	7
08/09	1	4	*	7

Triple Fatality – Slurry Tank

Construction - Equipment powered by combustion engine indoors

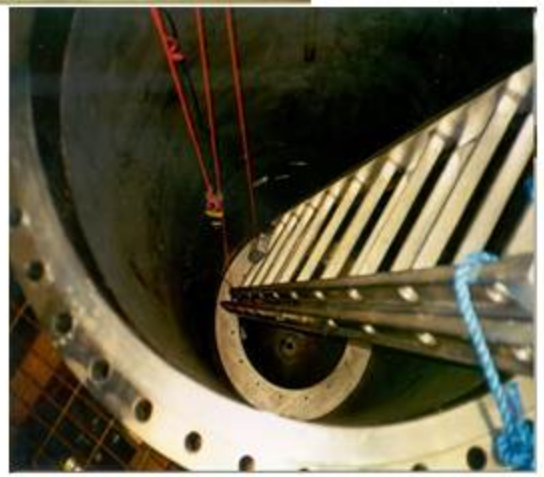
- Generators used indoors to power lighting/heaters -

  fatal CO poisoning of painter
- Petrol powered stone cutting saw used in basement -

  3 operators affected by CO poisoning

Manufacturing/fabrication -
TIG welding/damming

- Hazard – argon – asphyxiation
- Activity – TIG welding/Damming using argon
- Fatality when operator entered vertical vessel



Summary

- These and other incidents investigated by HSE showed:-

  Failure to carry out a suitable and sufficient risk assessment and implement a safe system of work

BECAUSE

Duty-holders were unaware of hazards / insufficient information and training regarding risks

What HSE has done

- Worked with others to develop training:
  - 6 National Occupational Standards for specifically training in different types of confined space
  - City and Guilds qualification available
- Provision of the Guidance
  - ACoP clarifying the Regulations
  - Website to support guidance
  - Work with industry on sector specific guidance – BSI specification on hypoxic environments

Review of the Guidance

- Review of the Regulations
- Review of the Guidance
  - Internal review
  - Consultation exercise
    - Provides industries views
    - Looking at incidents in UK, Europe and elsewhere

What's next?

The UK Government wants to ensure that regulation is properly applied and does not curtail growth

- Issues relating to consistent and appropriate application
- Guidance needs to explain how to comply rather than trying to remove risk completely

–What is a 'confined space'

- Criteria/Interpretation

–New industries/hazards

- Deliberate hypoxic environments

–Meeting the requirement of Regulation 5

–Role of the website

- Add to the information that can be in the ACoP

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