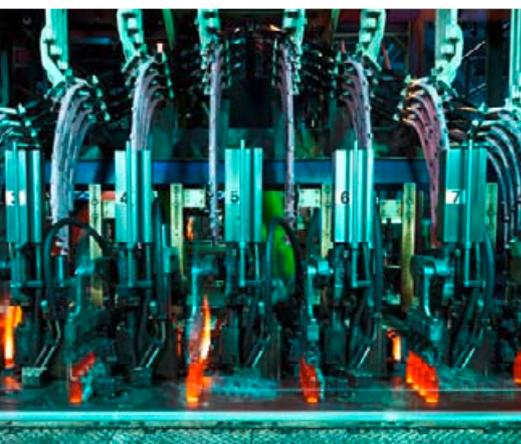


# CODE OF PRACTICE

## GLASS FORMING I.S. MACHINES



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**This Code of Practice has been developed by the IS Working Group of British Glass with the support of the Health and Safety Executive to provide guidance on the safe operation of IS Machines. This guidance may go further than the minimum you need to do to comply with the law.**

Together with acknowledgement for their contributions to and involvement in the production of this guidance, British Glass wish to thank those member companies who have provided texts, photographs, diagrams and illustrations dealing with the specific subjects covered herein.

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## SCOPE

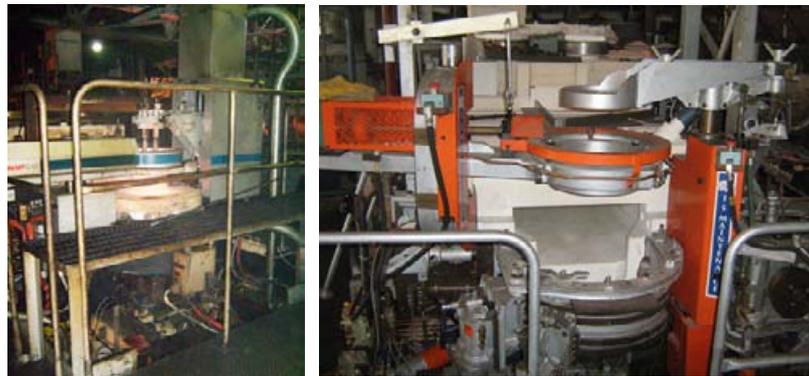
These guidelines cover glass forming machines (also known as '*Independent/ Individual Section*' (IS) and Press-Forming Machines) used throughout the container glass industry. The importance of complying with this code of practice is stressed because of the potential for serious accidents to occur. However, the risk can be minimised as long as suitable safety measures and procedures are implemented and enforced.

This guidance has been formulated as a means of reference for organisations which operate glass forming machines and associated ancillary equipment. Information within this guide will help employers ensure that glass forming machine operators, change teams and maintenance engineers are able to carry out their jobs as safely and efficiently as possible.

## DESCRIPTIONS AND TERMINOLOGY

### *Feeder and Forehearth Mechanism*

The feeder and forehearth mechanism is used to supply the glass from the forehearth to produce a uniform gob. E.g. length, width, weight and shape.



### *Glass Forming (I.S.) Machines*

Glass Forming, or I.S., Machines are made up of individual but identical sections placed side-by-side in-line. Each section comprises an arrangement of mechanisms enabling the sections to be started or stopped independently of the others.



Other equipment may be attached to the glass forming machine as follows:

*Transfer (Turn Table)*

This is used for transporting containers on a 90 degree bend; it is also a tool to adjust the container spacing for the stacker to stack ware into the Lehr.



*Stacker*

Is used for stacking containers onto the Lehr belt in rows at a given distance so annealing and cold end spray can be applied to the container to prevent scuffing before transportation.



*Hot-End Reject System*

This is used to reject containers that are not perfect or do not meet customer specifications.



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## LEGAL DUTIES

The law places both general and specific duties on employers requiring that risks are identified and addressed within the workplace, and includes providing the right kind of safe equipment for use at work, which must be used correctly and maintained in a safe condition.

The safeguarding of each dangerous piece of machinery should follow a hierarchy of control as follows:

- Elimination of risks through design or position;
- Provision of fixed guards;
- Provision of other guards and protection devices;
- Provision of protection appliances (jigs, holders, push sticks, etc).

All of the above must always be supplemented by the provision of information, instruction, training and supervision as is necessary.

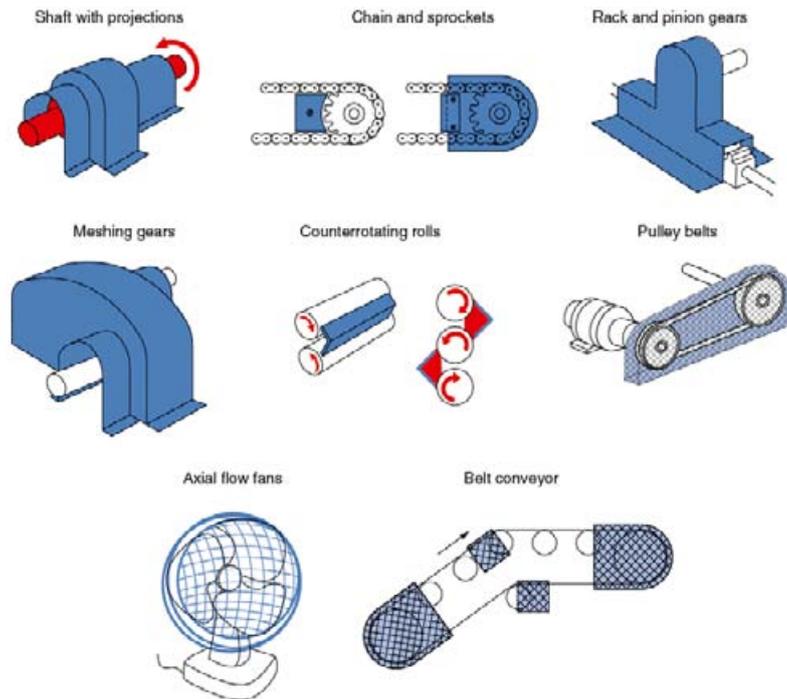


Figure 1: Types of Fixed Guard

It is also important for employers to ensure that their employees are consulted and understand any duties in relation to the appropriate legislation which relates to them, especially sections 7 and 8 of the *Health and Safety at Work Act 1974*.

This information must be covered during the induction period for all employees within the glass forming area and periodically reviewed.

## PURCHASING MACHINERY

When purchasing machinery, it is the responsibility of the purchaser to specify and ensure that the machinery bought is safe. Users have responsibilities under the *Provision and Use of Work Equipment Regulations 1998 (PUWER)*, as amended, to select and provide suitable work equipment – taking account of work conditions and health and safety risks; to ensure it is used correctly and is maintained in a safe condition. Purchasers should check that all new machinery is CE marked and accompanied by the manufacturers' Declaration of Conformity and comprehensive instructions for use and maintenance.

All new machinery must be designed and constructed to comply with the *Machinery Directive (2006/42/EC)* - implemented in the UK by the *Supply of Machinery (Safety) Regulations 2008 (SMSR)*, as amended. This requires that machinery undergoes a conformity assessment, meets the relevant essential health and safety requirements (EHSRs), is CE marked, has a technical file demonstrating how compliance has been met and is accompanied by an EC declaration of conformity and instructions for use and maintenance in the language of the end-user.

Machines voluntarily made to the specification of the harmonised type C standard BS EN 13042-3, *'Machines and plants for the manufacture, treatment and processing of hollow glass. Safety requirements. IS Machines'*, can be presumed to conform to the EHSRs of the machinery directive.

The technical file must show how the machine complies with this standard or otherwise meets the essential health and safety requirements of the Machinery Directive.

When purchasing new machinery you should ensure that the machine can be stopped and safely isolated. Depending upon the design of the machine it may be appropriate to request that this can be done with the revert arm elevated on the blank side of the machine to enable neck-rings to be changed at the blank side of the machine.

It is recommended that extensive discussions take place within the purchaser's organisation regarding design requirements, which must not only fulfil the technical process requirements but the necessary safety precautions required during the process to ensure the welfare of the operators. These discussions should be undertaken by a team of competent persons from within the employer's organisation which may include skilled employees, supervisors, maintenance staff, Health and Safety practitioner and management.

The outcomes of these discussions should be passed on to the supplier and their designers. Further discussions should take place to agree on the final product, and to ensure that all risks have been covered at every stage of design, commissioning, manufacture, installation and operation.

Any further requirements for safety devices and control measures should be identified. These should include cleaning, setting-up, lubrication and maintenance. Consideration should be given to where and how these will be used and located. This should include walkways, lighting, floor surface and ventilation.

Further consideration should be given to emergency stop controls and their application together with warning signs and markings in accordance with the manufacturer's recommendations and risk assessments conducted.

The employer must assess that the machinery complies with regulation 10, and that the designer meets the standard required by regulation 11, of the *Provision and Use of Work Equipment Regulations 1998 (PUWER)*.

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## HAZARDS AND RELATED ACCIDENTS

Molten glass is produced in a furnace and is then discharged via the forehearth and feeder and cut into sections (*'gobs'*) by a set of mechanical shears. Whilst still molten, the glass is delivered to the glass forming (I.S.) machine, where it is formed using a blank cycle to form the parison and the blow-mould cycle to form the finished container.

The hazards associated with glass forming machines include moving parts, hot moulds (and surrounding framework) together with hot glass and naked flames. The environment is typically found to be noisy. The principal hazards associated with forming operations are:

- Noise;
- Heat – glass, moulds and machinery;
- Moving machinery;
- Manual handling;
- Oil mist and fumes from lubricants;
- Access around the machinery and platforms;

- Compressed air;
- Transport and vehicles;
- Electricity – control panels, portable equipment and cleaning;
- Broken glass – fragments and particles.

It is important that organisations and their employees are aware of these hazards and the types of accidents and potential ill-health that could occur within and around the glass forming machine and take appropriate precautions and apply control measures where necessary.

The following are some of the types of accidents to be aware of:

- Entrapment;
- Manual handling;
- Slips, trips and falls;
- Struck-by;
- Burns;
- Foreign bodies;
- Cuts from glass.

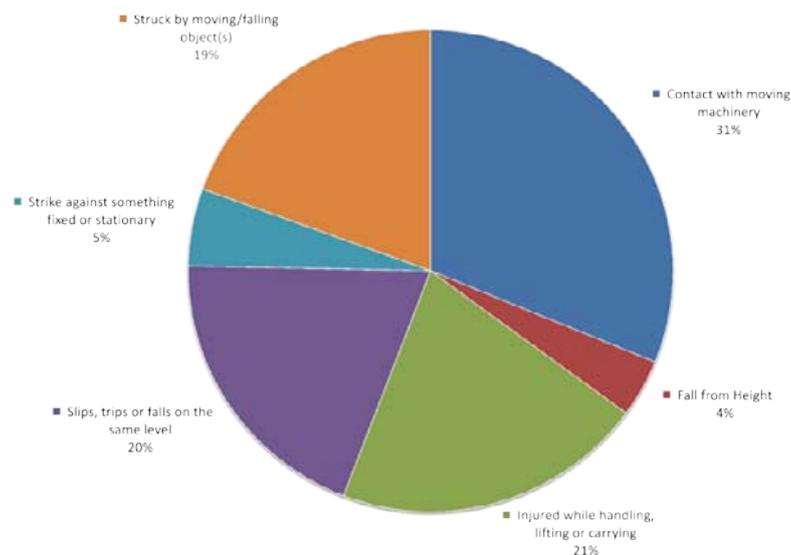


Figure 2: Kind of IS Machines RIDDOR Injuries (2005-10)

## RISK ASSESSMENTS

The risk assessment principle must be applied to the use of glass forming machines and should include the following types:

- Work equipment;
- General;
- Manual handling;
- COSHH;
- Noise;
- PPE;
- Fire;
- Heat stress;
- Other health issues.

Whilst carrying out the above types of risk assessment, consideration should be given to the danger zones of machinery under Regulation 11 of the PUWER Regulations, covered later in this code. Employers should also consider the positioning of the machinery and address any access problems that may occur or result in increased slips, trips and falls. Environmental issues should also be considered, with regards to emissions within the immediate area, and include noise, lighting, flooring, space around the machinery and temperature.

It is a legal requirement to eliminate or reduce the risks where reasonably practicable. In essence the term 'reasonably practicable' requires a judgement - the greater the risk, the more trouble, time and effort you should spend eliminating or controlling that risk. Applying this to IS Machines the following preventative and corrective measures are likely to be reasonably practicable:

- Design improvements and change of processes that eliminate the risks;
- Substitution - replacement with a safer alternative;
- Application of safety devices (e.g. invert/revert bars);
- Isolation or segregation of hazard (e.g. location of machine);
- Provision of air conditioned sound havens/control rooms;
- Use of CCTV to monitor processes;
- Limiting exposure, safe systems of work;
- Training, instruction and assessment;
- Warning systems such as signs, labels and instruction;
- Use of personal protective equipment (PPE).

Risk assessments must be maintained and reviewed if changes occur in practice. They should be used to inform all employees of any residual risks that still exist and the relevant control measures that apply.

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## HIERARCHY OF MEASURES

This is to ensure that risks are assessed methodically. The hierarchy must be applied in sequence according to each situation. The measures are to:

- Provide fixed guards;
- Provide other guards or protection devices;
- Provide protection appliances (jigs, holders, push sticks, etc); and
- Provide information, instruction, training and supervision as is necessary.

Having identified the hazard, employers have to consider each level of the hierarchy in turn.

In depth information about what to do can be found in HSE publications relevant to this subject, detailed in the '*References and Further Information*' section of this Code of Practice.

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## MACHINE GUARDING

Employers shall ensure that access is prevented to dangerous parts of the machinery using the hierarchical approach detailed in the '*Risk Assessments*' section of this Code of Practice. Documented risk assessments should be used to determine the guarding requirements together with manufacturer's information.

Fixed guarding should be used where practicable to reduce interaction between operator and machine.

Care should be taken to ensure that guards do not cause trapping hazards, decrease visibility or increase heat build-up as this could cause jam-ups.

It is essential that guards are properly maintained as accidents may occur where guards have not been included in the maintenance regime as part of the equipment.

It is also important that employees are made aware that it is both dangerous and illegal to remove guards and not replace them. Employees should understand that if a guard is missing, incorrectly adjusted or unsecured, or is believed to be defective or ineffective, this should be reported to the appropriate authorised personnel immediately for action to be taken.



The following are examples of appropriate guarding and types that should be considered:

- Feeder mechanisms - Fixed and Distance;
- Conveyor head and tail ends - Fixed;
- Heat shielding at the front of conveyors - Hinged;
- Revert safety bar - Removable;
- Transfers - Fixed;
- Stacker - Fixed;
- Blow head shaft - Fixed;
- End rollers - Fixed;
- Drives for feeders - as per Feeder Mechanism.



## SAFETY DEVICES AND CONTROL MEASURES

Organisations should ensure that the interaction between the operator and the machinery is kept to a minimum. The correct operation and use of safety devices must be adhered to to ensure risk is reduced and the relevant training must be included in any operator/maintenance team training programme. Consideration should be given to the positioning of the controls. All machine controls and safety devices must be included in any maintenance regime applied, i.e. planned preventive maintenance, condition-based maintenance or breakdown maintenance.

### *Mandatory Safety Devices*

The following safety devices should be fitted to all machines and new machines supplied with these measures as standard:

### Auto-Swab/Auto-Reject Extended Swab



This device is a switch or button on the blank side of each section that when activated on the second cycle puts the IS machine section into swab mode.

Swabbing procedures must be adhered to. The swab mode must not be used for changing equipment.

### Two-Handed Start

This is a typical operation for the safe start of an IS machine section. Both buttons must be pressed simultaneously for the section to start-up in synchronisation.



### *Additional Safety Devices*

The following pages include examples of different safety devices and other control measures. Due to the variation in machine design the following examples should be used where reasonably practicable and in conjunction with a risk assessment:

### Safety Handles



It is strongly recommended that these are fitted on each mould side section upright and are used for support when reaching into a section.

### Blank Mould Safety Bars



The device fits over the anti-deflection bracket and in-between the linkage which prevents the blanks from closing. Similar devices, for example, blank locking pins, can also be used.

### Snabb Valves

This device is a push-button valve that when activated stops the air going to the particular action that it controls i.e. blow-head mould close, blank close and invert operation.

All new machines, and existing machines where reasonably practicable, should be fitted with blow-head, mould-close, blank-close and invert operation snabb-valves.



### Neck Ring Tray



A neck ring tray, or similar, should be considered when changing neck-rings on the finish mould side of the machine. This device acts as a physical safeguard – acting as a safety bar preventing the moulds from closing – whilst also providing a place to store the rings during the operation.

### Operator Refuge

This is a sound-proof booth used by machine operators as a refuge from the heat and noise of the production environment.



### Invert Safety Bar



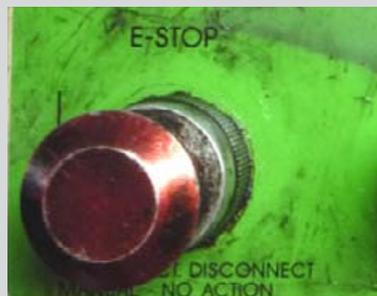
This device is placed on the invert rack to prevent the neck-ring arm from reverting.

### Indicator Plates

Indicator plates, fitted to the blank bridge, or other means such as illumination lights, may be used to clearly identify stopped or running sections - reducing the risk of human error by entering a running section.



### “E Stop” Emergency Stop Section/Machine



This device is identified as a red mushroom button.

*Whole Machine* - sited on the central control panel, the emergency stop will bring the whole machine to a stop.

*Individual Section* - Situated on the mould side and blank side of each section to bring that individual section to an immediate stop.

### Program Stop



Modern electronic machines have a control button or switch situated at the blank side of each section near the 'E' stop and will illuminate when activated. Pressing the button will stop the section in its safest position.

### Machine Staging/Flooring

Constructed with a square hollow steel frame for lightness and strength and covered with Durbar plating, the platform sections must be secure, constructed of suitable material and height to allow safe access to the machine platforms.



### Take Out Guard



It is recommended, subject to risk assessment, that these are fitted to the takeout column on each section and are used to prevent an operator from accidentally placing his hand into the adjacent section.

### T-Bars

T-bars are threaded lifting handles used for lifting moulds and blanks from machines.



### *Other Lifting Equipment*

Other examples of lifting equipment that can be used for lifting moulds, or other equipment, can include mobile and fixed equipment as pictured here:



Figure 3: Mobile Lifting Equipment



Figure 4: Fixed Lifting Equipment

## MAINTENANCE

Maintenance to machinery, usually undertaken at job changes, includes daily adjustments, engineering repairs, inspection, testing and cleaning operations.

During all job changes, or periodically for long-run jobs, the following maintenance checks and housekeeping should be carried out to ensure the safe operation of machine controls:



- All controls panels should be thoroughly cleaned and markings clearly legible;
- All controls to be checked for correct operation and illumination;
- Housekeeping on and around the machine should be conducted.

The requirements for the successful implementation of a maintenance regime, including who will be involved and how this will be carried out, must be considered at the earliest stage possible - see the '*Purchasing Machinery*' section.

Faults which affect production are usually apparent within a short time. However, a fault in a safety-critical element of a machine or system could remain undetected unless appropriate safety checks are included in maintenance activities. The frequency of maintenance activities is therefore crucial and the following should be taken into account when deciding upon appropriate maintenance intervals:

- Intensity of use - frequency and maximum working limits;
- Operating environment - for example extremes of heat, contamination;
- Variety of operations - is the equipment doing the same task all the time or does it change;
- The risks presented to health and safety resulting from any sort of malfunction.

The extent of the actual maintenance carried out at each interval may vary considerably from basic checks to complex integrated programmes. At all levels you must ensure that the maintenance is effective and is targeted at those parts of work equipment where failure or deterioration could lead to health and safety risks.

Where practicable, maintenance activities should take place while machinery is stationary and be carried out by competent I.S. machine engineers or contractors. However, where this is not possible, risk assessment must determine the requirements to ensure the safety of the employee carrying out the task and of others within the vicinity.

Isolation, temporary guarding, safety devices and safe systems of work should be considered - as detailed within the appropriate sections of this Code of Practice.

## INFORMATION, INSTRUCTION AND TRAINING

All staff must be competent to perform their duties. Training for the job-change team and machine operators will therefore need to be both extensive and prescriptive. Adequate information should be provided - including written instructions, practical training, demonstration and supervision where necessary. Training, and re-training where appropriate, in the correct method of operating glass forming machines should be provided. Practical and theoretical assessments should be applied to the training regime.

Competence can be defined as the ability to undertake responsibilities and perform activities to a recognised standard on a regular basis; it is a combination of skills, experience and knowledge. A competent individual should have the knowledge and skills to understand the hazards that could arise in every task they undertake (including normal operation, maintenance and emergency tasks). A competent trainer should have the ability to identify any gaps in a person's skill, knowledge or experience. They should then be able to identify the best ways of filling those gaps and be able to communicate effectively.

A grading system is recommended to indicate levels of competency, for example beginner, trainee and competent operator.

*Training should incorporate the following:*

- Induction training on Standard Operating Procedures (SOPs) and Glass Forming Machine familiarity – separate to shop-floor if possible;
- Shop-floor training with a competent trainer on recognition with safe operating procedures in practice and appreciation of different machines;
- Experience of related operations that may affect the IS Machine Operator, including mould change, but not necessarily full competence;
- Emergency procedures - further information is provided in the 'Emergency Planning' section of this code of practice.

On-the-job training with a competent person on all aspects associated with machine operations should include the following:

- Housekeeping;
- Operating manual events;
- Reporting defects and safety concerns;
- Fire and emergency procedures;
- Personal protective equipment;
- Noise;
- Machine controls;
- Starting/stopping a section;
- Working alongside others;
- Manual handling;
- Experience of relevant maintenance operations affecting the operator.

Organisations should assess training requirements on a regular basis. The frequency of such training and future training needs reviewed with operators, engineers and job-change team. Refresher training should be carried out as a result of further reviews and include the Safe Operating Procedures/Safe Systems of Work (SSOW). Training should also be provided on the action to take where the SOP/SSOW cannot be applied for any reason, or where there is a need to make changes to the existing SOP/SSOW.

Records should be completed, signed and retained of all training given to operators and maintenance staff.

### *Young Persons*

It is recommended that Young Persons, as defined under the *Management of Health and Safety at Work Regulations 1999*, should not operate Glass Forming Machinery due to the level of skill required.

## PERSONAL PROTECTIVE EQUIPMENT

PPE to control the risks relating to glass forming machine operation must be provided and risk assessed prior to issue and use. More detailed information about all of the PPE standards quoted below can be found in the 'References and Further Information' section of this document. The following is a suggested minimum standard, but risk assessment should determine the explicit requirement at employer sites:



Hearing Protection  
BS EN 352

Eye Protection  
BS EN 166

Whole Body  
Protection  
BS EN ISO 11612

Arm Protection  
BS EN 407  
BS EN 388

Hand Protection  
BS EN 407  
BS EN 388

Foot Protection  
BS EN ISO 20345

### *Additional Notes to consider in Risk Assessment:*

- Bump Caps (BS EN 812); subject to risk assessment, users should consider bump caps where significant risk of impact is identified;
- Flame Resistant/Retardant Protective Clothing (BS EN ISO 11612); subject to risk assessment, users should consider additional flame retardant materials or coatings for lower leg and forearms.

## BLOCKAGES/ JAM-UPS

Ensure that machines are set up to the correct engineering specification at ware changes to reduce the likelihood of blockage which may cause misalignment problems.

Where a blockage occurs, the appropriate safe system of work for stopping and starting a section must be followed at all times.

Where entry into a section is required, all available safety features should be used - as described in the 'Safety Devices and Control Measures' section of this Code of Practice.

Appropriate tools must be used to remove glass and, where possible, it must be placed straight into the cullet chute. Glass containers must never be thrown.



Glass which has to be swept onto the floor must be cleared up and removed immediately thereby allowing safe access for operators to start the section.

## CHANGING NECK RINGS

Where reasonably practicable, neck-rings should be changed from the blank-side of the machine to minimise risks to operators working across or over the machine conveyor. Where this is not possible then safety devices, for example neck-ring tray/safety bar, mould-close snabb valves, platform access ladders and heat-shields, should be considered to minimise the risks to operators at the front of the machine. See the 'Safety Devices and Control Measures' section for more examples and information about safety devices.

## SWABBING

The use of swab-free mould equipment and auto-swabbing is desirable, and is used in some processes. However, at this time, this is not technically achievable across the whole range of production processes.

As moulds reach the end of their life, modern replacements must be considered as part of the duty to keep risk assessments up to date.

The British Glass IS Machines Working Group will review developments in technology in search of a long-term solution.

The hierarchy should follow, where practicable and technically achievable:

- Use of swab-free mould equipment;
- Pre-coated mould equipment;
- Use of a suitable coating spray;
- Auto-swabbing;
- Use of a coating applicator;
- Use of extended swabs;
- Information, instruction and training;
- Personal protective equipment.



Some glass forming machines are fitted with an auto-swab cycle that is an aid to the manual lubrication process for machine operators.

In all cases where operators are actively involved with swabbing there should be a designated system and sequence of work in place and adequate Personal Protective Equipment must be worn as specified by risk assessment.

Where swab eyelets are not required for storage, swabs should be ordered without eyelets or the eyelets removed before issue. Where eyelets are required for storage, then swabs should only be ordered with eyelets that are sufficiently small to prevent entry of fingers/thumbs - eliminating the chance of operators' hands being trapped by the eyelet of a swab trapped in a machine.

Adequate training both off- and on-the-job, backed up by training materials such as manuals, videos and current best practice, should take place.

The following good practice principles must be adopted as a minimum for all manual swabbing operations and are reproduced as a guidance note (ref GC-021-01) available from British Glass:

- ALWAYS follow the safe working procedure;
- ALWAYS engage the swab cycle on a machine, where fitted, and visually check that the blanks and moulds remain open before swabbing;
- ALWAYS wear gloves when handling swabs;
- ALWAYS keep hands outside of the danger zone of the mould cavity, arc of the invert bar and take-out mechanism at all times;
- ALWAYS use a swab of suitable length or use extensions if needed;
- ALWAYS use a swab with a straight handle;
- ALWAYS replace swabs at job-change; Ensuring that they are of an appropriate length for the mould and in suitable condition for swabbing;
- ALWAYS wait at least one cycle before swabbing the finish moulds to determine the machine speed;
- ALWAYS soak swabs in dope before issue and after use they should be loaded, wrung-out and hung correctly at the doping station.

- NEVER perform swabbing operations unless you are fully trained and competent to do so;
- NEVER attempt to retrieve a dropped or jammed swab from a machine in operation – release immediately and stop the section;
- NEVER allow your hands within the mould danger zone; If your hands are not in the danger zone then they will not be caught!
- NEVER use a swab with a bent handle; If the swab is caught or drawn into the machine your hand will follow!
- NEVER place your finger within the eyelet of the swab; These are provided only to hang the swab – if the swab is caught or drawn into the machine your hand will follow!

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## HOUSEKEEPING

Organisations should ensure that robust housekeeping regimes are operated around the glass forming machine areas - which take into consideration spillages of oil, lubricant and waste glass. Poorly maintained and oily/dirty machines are more liable to catch fire. Machine controls should be thoroughly cleaned routinely to ensure that markings are clearly visible.

Housekeeping regimes should be built into the working day and employees should be encouraged to inspect and regularly clean their areas.

Combustible materials should not be stored at the machine area.

Equipment should be placed on stands or where it may not cause a tripping hazard.

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## EMERGENCY PLANNING

Emergency procedures that include a fire action plan should be put in place and regularly reviewed.

All employees should be fully trained on the appropriate action to take, including the action they should take on being alerted to a fire and in the practical use of portable

fire-fighting equipment, mobile foam units, mist and deluge systems, where provided.

The plans should include the responsibilities for isolating machinery and associated utilities.

Contingencies should also be put in place in the event of the loss of utilities.

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## HEALTH SURVEILLANCE

Health surveillance is required where deemed appropriate by the outcome of risk assessments or as specified by appropriate regulations. It is advisable for all new personnel working on or near glass forming machines to undergo a basic health assessment prior to working on a glass forming machine.

Records must be kept of any health surveillance carried out on individuals for up to 40 years after leaving a company.

The following are examples of appropriate health surveillance:

- Audiometry;
- Dermatological;
- Lung function;
- Musculoskeletal;
- Heat stress.

Further information and advice for health surveillance is available from British Glass in the publication *'Health Surveillance in the Glass Industry'*.

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## GENERAL SAFETY RULES

The following are good examples of safety rules to display on or near Glass Forming machines:

- ALWAYS communicate with the operator prior to commencing any work on their machine;
- ALWAYS ask for advice if unsure about any aspect of the machine or operation;
- ALWAYS check your machine platform at the start of every shift and notify any defects or repairs required;
- ALWAYS check that no other person is working on the section prior to restarting a section;
- ALWAYS inform personnel working within the adjacent area of your intention to restart a section prior to doing so;
- ALWAYS use the established Safe System of Work;
- ALWAYS read the relevant risk assessment(s) and follow the control measures;
- ALWAYS use the correct equipment/materials for the process;
- ALWAYS report any defects on the machinery, plant or equipment immediately on discovery;
- ALWAYS report any accident/incident/near-miss as soon as possible;
- ALWAYS ensure that the machine area is maintained to a high housekeeping standard;
- ALWAYS ensure that you understand the relevant emergency procedures;
- ALWAYS wear the correct Personnel Protective Equipment, as appropriate;
- ALWAYS look after your own health and safety as well as others;
- ALWAYS place bottles into the bin or chute - as broken glass particles could cause injury or present a slip hazard.

- NEVER use the machine or equipment unless trained and authorised to do so;
- NEVER take short-cuts when carrying out any operations.

## REFERENCES AND FURTHER INFORMATION

The following documents may be of help in gathering further information:

### *Legislation*

The main legislation applicable to the use of glass forming machines is as follows:

- Health and Safety at Work Act 1974;
- Management of Health and Safety at Work Regulations 1999;
- Provision and Use of Work Equipment Regulations 1998.

There are other regulations which are specific to certain areas of activity which include the following:

- The Control of Noise at Work Regulations 2005;
- Manual Handling Operations Regulations 1992;
- Personal Protective Equipment at Work Regulations 1992;
- Supply of Machinery (Safety) Regulations 2008 (SMSR) (as amended);
- Fire Safety (Reform) Order 2005;
- Lifting Operations and Lifting Equipment Regulations 1998;
- Control of Substances Hazardous to Health Regulations 2002 (COSHH) (as amended).

### *References and Further Information*

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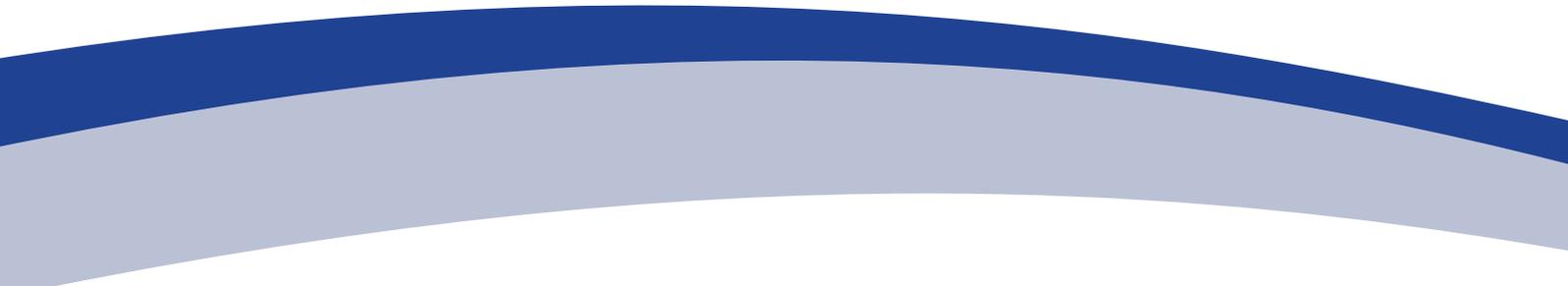
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