

## Human Error – How safe are your arrangements

Everyone knows that machinery must be safeguarded to prevent access to the dangerous part or to stop the movement of the dangerous part before any part of a person enters the danger zone. Despite this machines continue to kill and inflict serious injuries. Accidents happen when guards or safety devices are disturbed, removed, overridden or defeated or when people go inside guard enclosures for carrying out tasks such as setting, adjustment, cleaning, clearing blockages or running maintenance.

So what are *you* doing to make sure accidents will not happen at your machines? You may have provided a safe system of work and you may have trained relevant employees in that system of work. But that alone will not guarantee success. Human beings are prone making errors and they will violate rules especially if they are working under pressure or if they perceive that their supervisors or managers do not think the rules are important. They are likely to have this perception if supervisors do not always enforce the rules, if managers never check how well the rules are being followed and if supervisors or managers do not intervene every time they see a rule being broken. Employees are also more likely to violate rules if the rules are impractical or if they were not involved and consulted properly when the rules were written.

Here are some questions for you to ask yourself about the tasks your employees perform at machines.

Checklist	YES	NO
1) Have you identified all operational and maintenance tasks that <i>could potentially</i> involve working inside guard enclosures, disturbing guards or overriding or defeating safety devices?		
2) In identifying these tasks have you looked at the way they are performed on <i>by everyone</i> ?		
3) Do they include tasks that are carried out infrequently?		
4) In identifying these tasks did you observe work activities and look out for situations in which the working environment, plant layout and access make the job awkward and would be easier to perform from inside the guard, by removing the guard or defeating the safety device?		
5) Do these tasks really need to be performed at all?		
6) Do they need to be done that way?		
7) Can layout and access be improved to remove the need for disturbing guards or working inside enclosures?		
8) Can hardware, controls, adjustment devices, web and sheet feeding systems etc be modified to allow the job to be done safely from outside the guard enclosure?		
9) Have you carried out a detailed risk assessment for each task?		
10) Did the people who actually undertake the tasks participate in the risk assessment?		
11) In assessing the risks did you break the task down into its component steps?		
12) In assessing the risks associated with each task step have you systematically evaluated the potential for human errors including slips, lapses of memory, rule-based mistakes and knowledge-based mistakes and the potential for rules and procedures being violated?		
13) Have you examined past incident and accident reports for the tasks under consideration to identify human errors and rule violations?		
14) Can the hardware, controls, adjustment devices, feed systems be modified to eliminate or minimise the risk of human error and reduce the likelihood of rules and procedures being violated?		
15) Can they be modified, or additional safeguards provided, to make the arrangements error-tolerant so that human errors, if made, do not result in serious outcomes?		
16) Where appropriate, are there formal safe working procedures to be followed by those who perform the tasks?		

17) Do they identify the hazards and deal properly with the risks?		
18) Are they in a format that is standard (i.e. common) across the site?		
19) Have they been written according to sound human factors principles (see pages 26 to 31 of HSE publication "Reducing Error and Influencing Behaviour" (HSG 48))?		
20) Were they written by, or with the full involvement of, the people who perform the tasks?		
21) Do the employees who are required to follow the procedures value them?		
22) What is their perception of the importance that managers place on complying with the procedures compared with their perception of the importance managers' place on achieving productivity?		
23) How do senior managers, managers and supervisors communicate to the workforce the importance they attach to rules and procedures being followed properly at all times?		
24) Do managers and supervisors always observe the rules and follow the procedures themselves?		
25) Do they always intervene if they see a procedure not being followed, or not being followed properly?		
26) How well are people trained in the procedures?		
27) Do managers and supervisors monitor/check that important safety rules and working procedures are complied with?		
28) Do they report the results of monitoring checks to senior managers?		
29) Do senior managers ask for the results?		
30) How are the results analysed and used to review and improve performance?		

1. Have you identified all operational and maintenance tasks that *could potentially* involve working inside guard enclosures?
2. In identifying these tasks have you looked at the way they are performed on *all* shifts?
3. Do these include tasks that are carried out infrequently?
4. In identifying these tasks did you observe work activities and look out for situations in which the working environment, plant layout and access make the job awkward and would be easier to perform from inside the guard?
5. Do these tasks really need to be performed at all?
6. Do they need to be done that way?
7. Can layout and access be improved to remove the need for disturbing guards or working inside enclosures?
8. Can hardware, controls, adjustment devices, tail feeding systems etc be modified to allow the job to be done safely from outside the guard enclosure?
9. Have you carried out a detailed risk assessment for each task?

10. Did the people who actually undertake the tasks participate in the risk assessment?
11. In assessing the risks did you break the task down into its component task steps?
12. In assessing the risks associated with each task step have you systematically evaluated the potential for human errors including slips, lapses of memory, rule-based mistakes and knowledge-based mistakes and the potential for rules and procedures being violated?
13. Have you examined past incident and accident reports for the tasks under consideration to identify human errors?
14. Can the hardware, controls, adjustment devices, tail-feeding systems be modified to eliminate or minimise the risk of human error and reduce the likelihood of rules and procedures being violated?
15. Can they be modified, or additional safeguards provided, to make the arrangements error-tolerant so that human errors, if made, do not result in serious outcomes?
16. Where appropriate, are there formal safe working procedures to be followed by those who perform the tasks?
17. Do they identify the hazards and deal properly with the risks?
18. Are they in a format that is standard (i.e. common) across the site?
19. Have they been written according to sound human factors principles (see pages 26 to 31 of HSE publication "Reducing Error and Influencing Behaviour" (HSG 48))?
20. Were they written by, or with the full involvement of, the people who perform the tasks?
21. Do the employees who are required to follow the procedures value them?
22. What is their perception of the importance that managers place on complying with the procedures compared with their perception of the importance managers place on achieving productivity?
23. How do senior managers, line managers and supervisors communicate to the workforce the importance they attach to rules and procedures being followed properly at all times?
24. Do managers and supervisors always observe the rules and follow the procedures themselves?

25. Do they always intervene if they see a procedure not being followed, or not being followed properly?
26. How well are people trained in the procedures?
27. Do managers and supervisors monitor/check that important safety rules and working procedures are complied with?
28. Do they report the results of monitoring checks to senior managers?
29. Do senior managers ask for the results?
30. How are the results analysed and used to review and improve performance?