

SAFE MECHANICAL ISOLATION OF PLANT & EQUIPMENT

2007 MIDLANDS SURVEY FEEDBACK

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Safe Mechanical Isolation of Plant and Equipment – Midlands Survey

- All TT and LT COMAH sites covered
- 20 key questions
- Supporting paperwork requested with returns
- 6 weeks allowed for returns

Safe Mechanical Isolation of Plant and Equipment – Midland Survey

- COMAH operators asked to respond to questionnaires with supporting evidence
- Responses analysed by HSE to assess the need for follow up visits
- Workshop organised as the second phase of the initiative – targeted at operators / issues not covered well
- Visits completed to sites that did not respond where it was our opinion isolation procedures would be required

Safe Mechanical Isolation of Plant and Equipment

Background

- **Primary cause of recent incidents**
- **HSE inspections indicated that isolation methods were deficient**
- **Not to the standard in HSG253 “Safe Isolation of Plant and Equipment”**
- **Possibly in breach of COMAH Regulation 4 – “Every operator shall take all measures necessary to prevent major accidents and limit their consequences to persons and the environment”**

Safe Mechanical Isolation of Plant and Equipment – Midlands Survey

Considered including topic immediately in HSE intervention plans

Advantages of self assessment proforma:

- Raise awareness
- Site operators would not be charged
- Site operators take some immediate action following their self assessment

Safe Mechanical Isolation of Plant and Equipment – Midlands Results

- 47 companies sites were included in the survey
- 9 companies – not relevant
- 29 companies completed and returned the questionnaire
- 9 sites that did not respond will be visited

Safe Mechanical Isolation of Plant and Equipment - Results

- Survey letter had 20 questions – plus some sub questions
- One company gave a satisfactory response to just one question
- One company gave a satisfactory response to 3 of the questions
- One company gave appropriate responses to 25 of the questions

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
1. Does company have a procedure for mechanical isolation to tanks, vessels and pipes?	16	1
2. Are suitable isolation arrangements on plant/equipment clearly specified at the design stage?	11	0
3. Are staff competent and suitably qualified to carry out isolations of plant and equipment?	18	1
4. Do you use P&I diagrams, or other specific drawings to indicate the position for each isolation?	6	1

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
5. Do the company use an isolation certificate within the Permit to Work system?	7	0
6. Does the company demonstrate the use of mechanical isolation specific work packs?	5	0
7. Has the company identified the level of isolation against the individual hazards?	20	
8. Has the company demonstrated safe procedures for extended isolation periods?	12	2

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
9a. Has the company submitted a confined space procedure?	19	
9b. Is the level of isolation in line with HSG253?	12	
9c. Is there a contingency plan for isolation failure?	13	
10. Does the company demonstrate the control of isolation for short duration?	9	4

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
11a. Are blanks and blinds made to standards?	14	
11b. Are blanks and blinds marked or tagged?	11	
11c. Do the company demonstrate material compatibility?	12	
12. Are standards are used for flange bolt tightening? If so what standards are used.	14	4
13. Does the company demonstrate that isolations are proved?	14	3
14. Does the company demonstrate that isolations are monitored?	11	2

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
15. Do the company demonstrate that they carry out checks before the removal of an isolation to ensure that downstream plant integrity is maintained?	18	0
16a. Under what circumstances do the company allow own isolation? 16b. How are own isolations controlled?	11	4
17. Are valve types used for isolation specified?	22	0

Safe Mechanical Isolation of Plant and Equipment - Results

Question (29 Returns)	Yes (Q ans)	+ (Full comp)
18a. Is the condition of the spades and spectacles checked before use, and if so by whom?	14	2
18b. Is a reject criteria applied and if so what?	11	0
19. If spade and spectacle plates are used, is there a designated storage place for them when they are not in use,?	14	1
20. Are instruments isolated for calibration and repair, and if so how?	15	0

Safe Mechanical Isolation of Plant and Equipment - Survey Conclusions

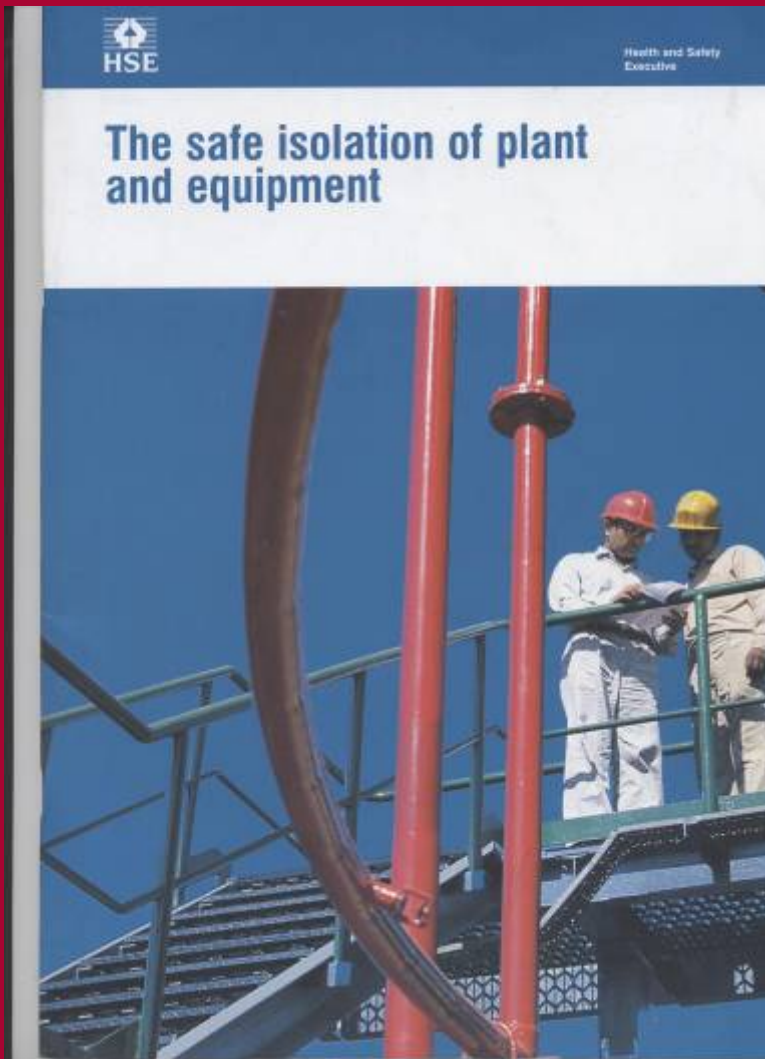
Little more than 5% of responses demonstrated complete compliance with HSG 253 - reasons:

- Company said activity not done or procedure not relevant at a particular site
- Supporting evidence /paperwork not provided
- Paperwork did not demonstrate full compliance with HSG 253

Safe Mechanical Isolation of Plant and Equipment - Survey Conclusions

- Overall, companies had provided positive answers to around half the questions asked
- Supporting documentation not provided or inadequate in support of many positive responses
- Many dutyholders have failed to address some key isolation requirements
- There is a need for improvement on many of the COMAH sites
- Site visits are required in most cases to follow up the responses provided
- This will be an intervention plan topic for HSE Inspectors at future visits

Safe Mechanical Isolation of Plant and Equipment



Questions?