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SAFETY AND HEALTH TOPIC SHEET NO. 16: MANUAL HANDLING AND STRAIN INJURIES

A safety and health 'topic sheet' aimed at raising awareness of hazards in the rope access industry. The series may be of use as a toolbox talk.

1 INTRODUCTION

1.1 A common hazard encountered whilst carrying out rope access work is manual handling. It is important therefore to follow manual handling requirements when using or moving equipment and materials, particularly when working at height.

1.2 It is the employer's duty to avoid manual handling, so far as reasonably practicable, if there is a possibility of injury.

2 WHAT CAN GO WRONG …

2.1 'Manual handling' is any activity that involves lifting, lowering, pushing, pulling, carrying or moving, holding or restraining. It also includes sustained and awkward postures, or repetitive motions. If undertaken incorrectly, serious injury can occur to personnel.

Case Studies
"While bristle blasting the underside of the pipework, the technician felt a pulling sensation in their left shoulder when applying pressure. Technician came down and reported to medic." *No rescue was required.*
"Technician was climbing after lunch, between pipes and experienced pain in his shoulder. He was safe and sitting on pipes and alerted his team mates. A rescue was initiated where the supervisor climbed to him, prior to attaching a 3:1 system to the technician and hauling him to safety. The technician was stripped of his harness and walked away escorted to the medic." *The shoulder was found to be dislocated causing significant pain.*
"While performing rigging work, technician felt pain in his groin after repositioning and evacuated to surface. After resting, the pain was still present so technician reported to rig medic who evacuated him to hospital for inspection/diagnosis. Technician had passed a full medical examination and had been working without problems since then." *No rescue was required.*
Source: IRATA Safety Bulletin 32, Strain Injuries

3 WHY THINGS CAN GO WRONG …

3.1 Incorrect manual handling techniques can cause injury or harm to personnel, most commonly spinal injuries and knee/shoulder strains.

3.2 Repetitive strain injury impacts muscles, nerves, ligaments and tendons. This type of injury typically occurs from improper technique and/or repetitive motion, e.g. ascending.

4 WHAT YOU CAN DO …

4.1 A hierarchy of measures to reduce the risks of manual handling can be set out as follows:

- avoid hazardous manual handling operations so far as is reasonably practicable;
- assess any hazardous manual handling operations that cannot be avoided;
- reduce the risk of injury so far as is reasonably practicable.

4.2 The most effective measure is to avoid the need for manual handling completely.

4.3 Where it is not possible to eliminate the need for manual handling, reduce the consequence or likelihood of the risk by implementing one or more control measures. Ensure the most ergonomic body position in relation to the task and worksite.

4.4 You know your body best. Do not push it to its limits simply to “get the job done faster”.

4.5 Rope access work can be strenuous. When facing a physically demanding task, ensure that you warm up appropriately prior to undertaking any work.

4.6 If any discomfort is being experienced, whilst carrying out a task, stop the job and reposition yourself prior to commencing the task. If discomfort continues, or the task cannot be carried out safely, it should not be carried out at all.

4.7 If you experience pro-longed tenderness, stiffness or tingling an in affected area, seek advice from your medical practitioner.

5 HOW YOU CAN DO IT …

5.1 Apart from being a legal requirement, undertaking a risk assessment will help you implement the control measures.

5.2 Control measures include:

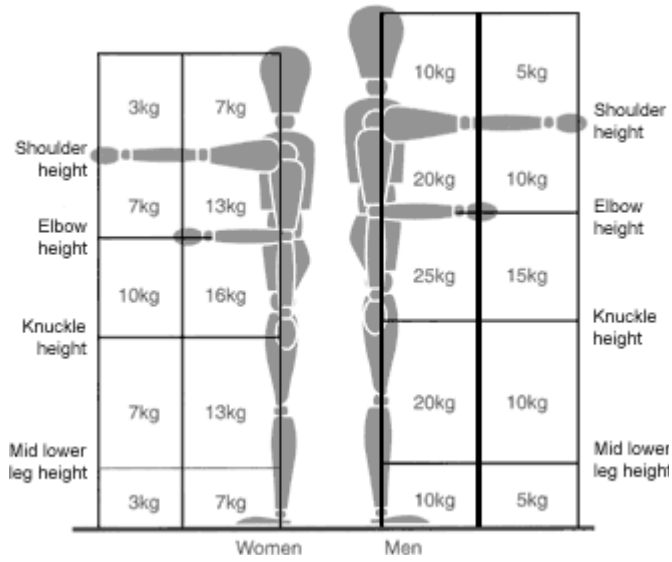
- Attending mandatory manual handling training session(s);
- Using ‘safe lifting’ manual handling techniques at all times (see below);
- Giving clear instructions on planed lifts, at tool box talks, etc.;
- Performing warm-up exercises before undertaking any strenuous activity.

5.3 When manual handling is inevitable make sure you use good manual handling practice, including:

- Use mechanical aids for lifting where possible;
- Performing movements smoothly and in a controlled manner;
- Bend knees when lifting loads from the ground or a low position;

- Hold loads close to the body;
- Carry out work in a comfortable position with proper breaks;
- Keep loads light and gain assistance when carrying heavy or unwieldy objects.

5.4 Advice[1] has been pushed on the sort of weights that are likely to cause injury:



5.5 The weights shown in the figure are not meant to be interpreted as 'safe limits'. Injury may still occur if lifting lighter loads when other 'risk factors' are present, e.g. an awkward lifting position, or if it exceeds an individual's capability.

5.6 When handling the kinds of weights shown then a risk assessment is likely to be needed. Remember, the figures assume that you are lifting easily held, compact loads in ideal conditions.

5.7 Correct technique includes:

- Avoiding excessive bending or twisting;
- Gaining assistance to move heavy or awkward loads;

5.8 Don't carry things up ladders unless in a bag.

5.9 Use rated lifting bags, etc. appropriate to the mass of the contents.

5.10 In addition, it is important to ensure that tools and equipment are secured when being used or moved around a work area. This may include:

- Securing tools and equipment to a belt or in a toolbox/container when not in use;
- Using a lanyard on hand tools while in use;
- Keeping tools and equipment away from unprotected edges;
- Hoisting materials, tools and equipment separately to a work area;

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[1] See Appendix 3, Guidance on the Regulations (https://www.hse.gov.uk/pubns/priced/l23.pdf)

- Making sure that catch platforms and/or safety nets are in place before moving equipment, tools and materials.

6 ACTION

6.1 Review your management system's procedures for manual handling and strain injuries.

7 REFERENCES

7.1 Further information can be found in:

(a) IRATA International code of practice for industrial rope access (Third edition, September 2016)[2]:
- Part 3: Annex A: Table A.3, Example of a risk assessment using risk value and residual numerical values
- Part 4: 4.2.8, Manual Handling Operations Regulations

(b) Training, Assessment and Certification Scheme (TACS) for personnel engaged in industrial rope access methods (Edition 005, 20/05/2021)[3]:
- 7.7.15, Rescue dummies
- 7.7.16, Masses

7.2 For a list of current (and past) 'safety communications' by IRATA, see www.irata.org.

8 RECORD FORM

8.1 An example *Safety and Health Topic Sheet: Record Form* is given below. Members may have their own procedure(s) for recording briefings to technicians and others.

9 FURTHER READING

Manual Handling Operations Regulations 1992, SI 1992/2793[4]
- amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002 SI 2002/2174[5]

Manual handling, Manual Handling Operations Regulations 1992 (as amended), Guidance on Regulations, L23 (HSE)[6]

Manual handling at work, A brief guide, INDG143(rev3), (HSE)[7]

Making the best use of lifting and handling aids, INDG398(rev1) (HSE)[8]

Manual handling assessment charts (the MAC tool)[9]

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2 www.irata.org/downloads/2055
3 www.irata.org/downloads/2059
4 www.legislation.gov.uk/uksi/1992/2793/contents/made
5 www.legislation.gov.uk/uksi/2002/2174/regulation/7/made
6 www.hse.gov.uk/pubns/priced/l23.pdf
7 www.hse.gov.uk/pubns/indg143.pdf
8 www.hse.gov.uk/pubns/indg398.pdf
9 www.hse.gov.uk/msd/mac/

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Reason for talk:			
Start time:		**Finish time:**	
Attended by *Please sign to verify understanding of briefing*			
Print name:		**Signature:**	
Continue overleaf (where necessary)			
Matters raised by employees:		**Action taken as a result:**	
Continue overleaf (where necessary)			
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