



POWER PRESS SAFETY

DURATION: 1 day

AIM: To satisfy the requirements of Part 4 of the Provision and Use of Work Equipment Regulations 1998 in relation to the training of Authorised Persons to inspect and authorise Power presses for use.

OBJECTIVES:

On completion of the course delegates will be able to:

1. Appreciate the causes, costs and effects of accidents associated with the operation and setting of power presses and press brakes.
2. Understand the requirements of HSW Act and PUWER 1998 including particular reference to Part 4 and appreciate the implications of related regulations (NAWR, MHOR, WHSWR)
3. Recognise a range of different power presses and press mechanisms with particular reference to clutch, flywheel and braking arrangements and understand function.
4. Describe the main features and functions of power press guarding arrangements with reference to fixed, interlocking, automatic and photo electric systems
5. Appreciate the influence of tooling design on press safety with particular reference to closed tools.
6. Carry out routine maintenance procedures according to manufacturers' instructions and the requirements of the regulations.
7. Understand the purpose and outcome of the Thorough Examination of power presses.
8. Carry out the inspection of power presses and press brakes in accordance with the requirements of PUWER.
9. Appreciate basic principle of press setting and setter's role.

PROGRAMME

Introduction: Course arrangements and Objectives.

Accident Causation: What causes accidents with power presses and press brakes – Primary and contributory causes. RIDDOR and implications for the individual, and company.

Legislation: Health and Safety at Work Act, PUWER 1998 in general. Employees and Employers duties. Implications of the Management of Health and Safety at Work Regulations 1999 re: Risk assessment, capability and training, employee's duties to report defects.

Coffee:

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- Legislation continued:** Provision and Use of Work Equipment Regulations (PUWER) as applied to Power Presses and Press Brakes. PUWER Part 4 – Safe use of Power Presses and ACOP – detailed insight. Power press noise, airborne mist and manual handling implications in use of Power Presses and general workplace issues.
- Press Examination & inspection** The Through examination and Report according to the guarding arrangements on the press. The guidance for examiners and maintenance engineers HSG 236 – Power Presses Maintenance &.Thorough Examination.
- Quiz:** Health and Safety Law
- Lunch:**
- Press Mechanisms:** Explanation of how axial, radial and rolling key clutches function. How friction clutches and dog clutches function. Braking arrangements calliper, band, drum, disc. The flywheel. Mechanical failures that lead to unintentional stroke. Video – Power Presses Part 1 – Press Mechanisms.
- Guarding arrangements:** Purpose of guarding. Fixed, interlocking, automatic and Photo-electric guarding arrangements and requirements. BS EN 294 1992 – Safety of machinery – guarding implications - Safe distances to prevent danger zones being reached by upper limbs. BS EN 349 max allowable gaps in trapping zones. HSG 180 –Application of electro-sensitive protective equipment using light curtains to presses and press brakes.
- Video Power Presses Part 2 -Guarding Arrangements and maintenance.
- Press inspection:** The Press Certificate purpose information required on the record and location on press. The authorised person signature. The Press cards and inspection process.
- Practical exercise on floor carrying out press inspection.
- Tool Design:** The Closed tool, Punch tool, problems with backstops and guide posts.
- Tool setting principles:** Operation in manual mode, Safety features where ram in moved under power (large presses, end wheel presses). Avoiding bottoming – setting for tool height. The Pitman maximum exposed length, Tool packing and clamping arrangements, the importance of cleanliness. Lubrication requirements. Operator instructions.
- Post Course Test:**
- Summary questions:**
- Course Notes:** Full guidance notes will be issued at the end of the training.
- Certification:** Certificate of Training will be issued for each delegate