NPORS

C402

LEARNING OUTCOMES

SLINGER/SIGNALLER: ALL TYPES, ALL DUTIES

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C402

LEARNING OUTCOMES

Explain the hazards of working in the construction industry, and their responsibilities as a slinger/signaller	• Why the industry has many hazards and why safe working practices must be adopted and maintained • why personal health and safety is not just physical injury and can include the effects of noise and vibration. All of which can lead to lost time, lost income, expense for the employer, fines, custodial sentences etc. • Health & Safety at Work etc Act 1974, Provision and Use of Work Equipment Regulations (PUWER), Management of Health and Safety of Work (MHSW) Regulations, Construction (Design & Management) Regulations (CDM), Vibration at Work Regulations, Road Traffic Act, HSG144, LOLER, HSG47 etc. in accordance with risk assessments, method statements, codes of practice and other relevant legislation, regulations, and industry good practice • operators' moral, legal, and environmental obligations and environmental obligations • reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) • past incidences involving relevant plant and pedestrians • working with other related roles occupations
Identify the roles and responsibilities of the lift team	• Appointed person • Crane/lift supervisor • Other signallers • Crane and equipment operators • Crane/lift co-ordinator • Ancillary workers • Other associated occupations
Identify information relating to the preparation for the slinging and signalling of loads	Interpreting and extracting appropriate information from: drawings, specifications, schedules, risk assessments, method statements, lift plans, verbal briefings, manufacturers' information
Identify and explain the different types of lifting equipment and lifting accessories	• The lifting accessories in accordance with a lift plan to include chain sling, webbing sling, wire rope, D shackle, bow shackle, integral lift points • types of lifting equipment to be included: cranes, lorry loaders, excavators, lift trucks, overhead cranes • the methods of rating for multi-legged slings, working load limit, safe working load, interpretation of markings, and down-rating of lifting accessories for lifting for any particularly adverse conditions of use • definition and application of uniform load method multi-legged slings • the uses, applications, and functions of various types of lifting equipment • hazards associated with slinging methods

C402

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Undertake all pre-use checks on lifting accessories	• Identifying and interpreting valid certification for maintenance, inspection, and thorough examination • regulatory requirements for the acceptance and non-acceptance of a declaration of conformity in lieu of thorough examination certification • pre-use checks on a range of lifting accessories to ensure serviceability for intended operations including chain sling, webbing sling, wire rope, D shackle, bow shackles • identify non-serviceable items of lifting accessories • the pre-use check requirements of specialist lifting accessories i.e. lifting beams, clamps, vacuum lifters, lifting magnets, c-hooks and lifting forks
Identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for slinger / signaller use	• What safety control equipment/PPE should be worn/used for slinger/signaller and include the following: suitable safety footwear, ear defenders, face/eye protection, dust mask, suitable gloves, overalls, hard hat, respiratory protective equipment (RPE), protective clothing etc. • Why weather conditions, including heat and cold, can determine what PPE is worn when carrying out the role of slinger/signaller and the personal effects of incorrect equipment
Explain procedures for placing non-serviceable items out-of-service	• Procedure for identifying and rejecting damaged and defected lifting accessories • the importance of checking all lifting accessories • types of damage and the implications of using damaged or unsuitable lifting equipment • the sequence of pre-use checks and procedures for in–service and out-of-service markings • rejection criteria for removing lifting accessories from service • purpose of quarantining defective items
Identify and explain centres of gravity and establish weights of loads	• Methods of establishing centres of gravity including: test lifts, balanced loads, un-balanced loads, loose loads, bundled loads, containerised loads • identification of load types, volumes, characteristics, areas, density, moisture content, load markings, manufacturer's information, lift plans • how to establish weights of loads from a range of given information

C402

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Ensure the work area is clear of hazards and ensure that all safety checks at the work area have been carried out	• Preparing an exclusion zone and identifying any hazards or situations that are likely to be encountered in a lifting operation including: - keeping clear of moving equipment and loads - underneath slung loads and oversailing - crush zones - edges - working at height - poor / limited lighting - environmental conditions - poor ground conditions - places of limited movement and restricted spaces - suitable and authorised landing areas - movement and storage of materials by manual handling or mechanical lifting - basic effects of wind on loads - unauthorised personnel in the area - reporting safety issues to supervisory/managerial personnel • Actions required for emergency situations • ensure the designated area is suitable and safe for the lifting operation
Attach various types of loads to lifting equipment using the relevant lifting accessories and procedures ensuring load balance, security, and integrity	• Selecting, handling, assessing, protecting, and using (assemble, set up and adjust) lifting accessories and aids • different attachment points for types of lifting equipment • manual handling requirements for various types of lifting accessories • conforming with lifting equipment rated capacities and corresponding working radius • undertaking test lifts • attach loads to lifting equipment, to include the following: balanced, un-balanced, loose, and bundled loads • ensuring the alignment of the accessory attachment point and load, taking into account boom / jib deflection • methods of ensuring integrity and security of loads including methods for netting, sheeting, and strapping
Direct and guide the movement of loads to different types of location using different methods of communication with crane or lifting equipment operator	• The purpose of a trial run • communicating using hand signals, hand signalling equipment in line with published guidance material • electronic communication, voice commands, procedures, and limitations • guiding, controlling, and placing suspended loads by recognised methods of communication and agreed operational procedures • determining and checking the route of the load before and during the lift including distances, clearances, landing position and other activities (including lifting) in the area • load movement where loads are blind to the equipment operator • load movement where pick and carry activity is required to complete the task • risks for slinger signaller and others affected by the pick and carry operation • accurately control placing of loads • controlling loads using equipment i.e. tag lines, push / pull poles • landing the load to allow lifting accessories to be retrieved

C402

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Detach various types of loads from the lifting equipment using relevant procedures	• Ensuring stability of loads once landed • detaching procedures for accessories from loads and lifting equipment • ensuring load integrity following disconnection • how to reconfigure lifting accessories after detachment following placing of a load so that any component part does not foul structures or objects
Explain environmental considerations	• Health and social reasons to reduce machine emissions • government industry zero emission initiatives • air quality and the component gases of air • how engine emissions affect air quality and the effects on human and environmental wellbeing • measures to reduce emissions during operations including alternative / low emission fuels, fuel treatments and particulate filtration systems etc. • minimising engine usage • appropriate disposal of waste • spillage procedures
Carry out all post lifting checks and securing procedures	• Function and requirements of end of service procedures • requirements for cleaning and protecting accessories when out of use • typical types of lifting operation damage on accessories • security and storage procedures • post lifting documentation requirements

**The learning outcomes listed should not be considered in isolation and may be added to in order to accurately reflect the learner's duties and working environment*

SUPPORT AND STANDARDS
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