
Overview

This standard identifies the competences you need to plan and install the new manufacturing process associated with a new product/process being developed using advanced manufacturing methods and techniques and introduced for the first time. You will be required to produce the design with relevant others in the context of your area of responsibility.

Your responsibilities will require you to comply with organisational policy and procedures for ensuring, through your technical support of the team, the planning and installation of the new process. You will also report any problems that you cannot personally resolve to the relevant authority. You will be expected to work unsupervised, either on your own or with the team, which you may lead or direct, taking full responsibility for your actions, and possibly for the work of colleagues.

Your underpinning knowledge will provide a good understanding of general and discipline-specific engineering principles and processes. You will be fully conversant with organisational procedures and systems for producing designs for new products, in the context of your own expertise and area of responsibility.

You will be fully aware of any health, safety and environmental requirements, and the appropriate legislative and regulatory frameworks, applicable to your area of responsibility. You will be required to ensure that safe working practices are maintained throughout and will understand the responsibility you owe to yourself and others in the workplace.

Performance criteria

You must be able to:

1. Access and accurately interpret all relevant work instructions and information
2. Work safely at all times and in accordance with all relevant legislation, guidelines, policies, procedures and protocols
3. Produce a risk assessment and method statement for the work activities to be carried out
4. Deal promptly and effectively with any problems within your control and report those which cannot be solved
5. Access and gather the appropriate equipment, accessories and components and other resources to carry out the work activities
6. Comply with industry practices and organisational procedures to ensure the co-ordination of site services and work activities
7. Wear PPE in accordance with organisational procedures
8. Confirm customer build dates and delivery schedule requirements for the new product
9. Determine organisational availability of in-house equipment against the planned manufacturing layout
10. Create delivery plans for equipment and **resources** against the planned manufacturing layout
11. Identify and apply the security requirements associated with the work and confirm with relevant others
12. Develop removal plans for redundant **services** and equipment from the planned manufacturing area
13. Develop installation plans for new **services** in the new manufacturing area against

the agreed floor plan layout

14. Develop and agree individual delivery **sub-contractors/machine builders plans** for the manufacturing area
15. Construct a master plan for the installation of the new manufacturing process against agreed floor plan layout
16. Obtain sign-off and agreement from stakeholders for the master plan
17. Implement and manage the installation of the new manufacturing process against the master plans
18. Report project progress to relevant parties at the agreed stages of the plan
19. Identify variations to the planned programme of work that may have the potential to impact on the work activities to be undertaken
20. Confirm with relevant others the corrective actions to ensure that any variations to the planned programme of work will have minimum impact on the work activities
21. Complete and store all relevant documentation in accordance with organisational procedures
22. Dispose of waste in accordance with organisational procedures
23. Leave the work area in a safe condition on completion of the work activities in accordance with organisational procedures

Knowledge and understanding

You need to know and understand:

1. The current legislation, guidelines, policies, procedures and protocols which are relevant to your work practice and to which you must adhere
2. The scope and limitations of your own competence, responsibilities and accountability
3. Procedures to access and interpret all relevant work instructions and information
4. Methods and techniques to produce a risk assessment and method statement for the evaluation work
5. The hazards and risks which may arise during the work and how you can minimise these
6. Specific procedures for reporting issues which are beyond your competence, responsibilities and accountability
7. The duty to report any acts or omissions that could be unsafe/detrimental to you or relevant others
8. How to identify and apply the security requirements associated with the planning and installation work
9. How to develop installation plans for new **services** and removal plans for redundant **services**
10. How to construct a master plan for the installation process and manufacturing facilities using a range of **resources**
11. How to develop and agree individual delivery **sub-contractors/machine builders plans** for the manufacturing area
12. How to use project planning software
13. How to develop specific, measurable, realistic installation objectives and deliverables with sub-contractors/machine builders, allowing progress to be monitored and measured
14. The tools and techniques available for planning and monitoring the installation process
15. How to breakdown the installation process into individual deliverable activities/tasks
16. How to allocate specific activities/tasks and responsibilities for the installation process, in accordance with individual skills and abilities
17. How to determine the specialist help you may require during the installation

process, and how this can be obtained

18. How to present information effectively to management, sub-contractors/machine builders, customers and others

19. How to solve problems and overcome barriers/difficulties encountered during the installation process

20. How to apply construction design management (CDM) techniques to ensure compliance with health and safety regulations for the people installing the new process

21. How to monitor progress of the installation process in terms of delivery on time, to budget, with agreed levels of quality

22. The principles and practice of sustainability

23. The importance of establishing and recording responsibilities for new installation process

24. The mechanism used to establish customer build and delivery schedule requirements

25. How to establish the availability of equipment against the planned layout requirements

26. The factors to be considered in evaluating the availability of shared in-house and freely available equipment

27. The principles and techniques used in an installation planning exercise

28. The factors that should be taken into account for disseminating information before and after an installation planning process

29. The types of problem that could occur during the installation process, and how to create plans that minimise their effects

30. The methods and techniques used to plan new services in a planned manufacturing area

31. The organisational guidelines and procedures for the development and agreement of contracts with sub-contractors/machine builders for new work

32. Who should be involved in the evaluation process and agreeing a team ethos and membership

33. The problems solved and lessons learnt from feedback influencing future development and planning

34. The importance of communication, keeping relevant others informed during the work

35. Organisational management structures, roles, and responsibilities

36. The procedures and methods relating to the coordination of inter-disciplinary and multi-disciplinary teams

- 37. How to dispose of waste in accordance with organisational procedures
- 38. How to complete and safely store all relevant documentation in accordance with organisational procedures

Scope/range related to performance criteria

Work instructions and information

- Drawings
- Environmental requirements
- Manufacturer instructions
- Method statements
- Specifications
- Sustainability requirements
- Work schedules/programmes

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Equipment, accessories and components

- Access equipment
- Computer hardware
- Consumables
- Hand tools
- Materials
- Power tools
- Safety equipment (including PPE)
- Software

Organisational procedures

- Accident reporting
- Communication
- Customer services
- Emergencies

Plan the Installation of New Advanced Manufacture Processes

- Implementing and monitoring health and safety requirements and issues
- Implementing and monitoring issues relating to the environment and sustainability
- Information management
- Project management
- Risk assessment

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Relevant others

- Client representatives
- Customers/clients
- Service providers
- Site/contract/production manager
- Supervisors
- Work colleagues

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Resources

- Equipment
- Facilities
- Finance
- Materials
- People
- Plant
- Services

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Services

- Coolant supplies
- Electrical supplies
- Environmental controls
- Fire equipment and alarms
- Gas supplies
- Heating
- Lighting
- Pneumatic supplies
- Waste streams
- Water supplies

Sub-contractor/machine builder plans

- Acceptance criteria
- Construction design management (CDM)
- Cost breakdown
- Delivery schedules
- Health and safety requirements
- Performance guarantees
- Quality standards
- Specifications

Plan the Installation of New Advanced Manufacture Processes

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