Overview

This unit identifies the competences you need, to plan and manage the installation of a new manufacturing process. You will be required to establish customer build dates and delivery schedule for the new product. You will need to establish the availability of shared and freely available in-house equipment for use in the new manufacturing process, as well as the need for new equipment and resources. You will also be required to identify and agree with sub-contractors/ machine builders' delivery plans for the new manufacturing process.

Your responsibilities will require you to comply with organisational policy and procedures for establishing a master plan for the whole installation process and the facilities required. You will need to obtain sign-off for these plans from the appropriate stakeholders, prepare contracts for sub-contractors/machine builders, and manage installation activities against the agreed master plan. 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 or subordinates.

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 development of plans for the installation of a new manufacturing process for a new product, 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.
Plan and manage the installation of the new product manufacturing process

Performance criteria

You must be able to:

P1 confirm customer build dates and delivery schedule requirements for the new product
P2 determine organisational availability of in-house equipment against the planned manufacturing layout
P3 create delivery plans for in-house/new equipment and resources against the planned manufacturing layout
P4 determine removal plans for redundant services and equipment from the planned manufacturing area
P5 establish installation plans for new services in the new manufacturing area against the agreed floor plan layout
P6 identify and agree individual delivery plans with sub-contractors/machine builders for the manufacturing area
P7 construct a master plan for the installation of the new manufacturing process against agreed floor plan layout
P8 obtain sign-off and agreement from stakeholders for the master plan
P9 implement and manage the installation of the new manufacturing process against the master plan
P10 report project progress to relevant parties at the agreed stages of the plan
P11 deal promptly and effectively with any problems during the installation process
P12 record the results of planning and installation activities, in accordance with agreed procedures
Plan and manage the installation of the new product manufacturing process

**Knowledge and understanding**

You need to know and understand:

- K1 the roles and responsibilities of yourself and others under the Health and Safety at Work Act
- K2 how to develop specific, measurable, realistic installation objectives and deliverables with sub-contractors/machine builders, allowing progress to be monitored and measured
- K3 the tools and techniques available for planning and monitoring the installation process
- K4 how to breakdown the installation process into individual deliverable activities/tasks
- K5 how to allocate specific activities/tasks and responsibilities for the installation process, in accordance with individual skills and abilities
- K6 how to determine the specialist help you may require during the installation process, and how this can be obtained
- K7 how to present information effectively to management, sub-contractors/machine builders, customers and others
- K8 how to solve problems and overcome barriers/difficulties encountered during the installation process
- K9 how to apply construction design management (CDM) techniques to ensure compliance with health and safety regulations for the people installing the new process
- K10 whom to liaise with and whom to obtain relevant and specific information from to support and assist you during the planning and installation process
- K11 how to monitor progress of the installation process in terms of delivery on time, to budget, with agreed levels of quality
- K12 the organisational procedures and information systems for storing installation plans for new product data
- K13 the importance of establishing and recording responsibilities for new installation process
- K14 who should have responsibility for the different parts of the installation process
- K15 the mechanism used to establish customer build and delivery schedule requirements
- K16 how to establish the availability of in-house equipment against the planned manufacturing layout requirements
- K17 the factors to be considered in evaluating the availability of shared in-house and freely available equipment
- K18 the various procedures that can be used in the installation planning process
- K19 the principles and techniques used in an installation planning exercise
- K20 the factors that should be taken into account for disseminating
Plan and manage the installation of the new product manufacturing process

- Information before and after an installation planning process
- K21 The types of problem that could occur during the installation process, and how to create plans that minimise their effects
- K22 The methods and techniques used to plan new services in a planned manufacturing area
- K23 The organisational guidelines and procedures for the development and agreement of contracts with sub-contractors/machine builders for new work
- K24 How to construct a master plan for the installation process and manufacturing facilities
- K25 How to use project planning software
- K26 The limits of your own authority, and to whom you should report if you have problems that you cannot resolve
Plan and manage the installation of the new product manufacturing process

Additional Information

**Scope/range related to performance criteria**

You must be able to:

1. carry out all of the following activities in the planning activity:
   1.1 prepare installation plans against customer delivery requirements
   1.2 construct a master plan that includes delivery, removal and installation plans
   1.3 manage the installation of the new manufacturing process against the master plan
   1.4 communicate information to the appropriate people

2. establish availability of in-house equipment in terms of both of the following:
   2.1 shared existing resource
   2.2 freely available resource

3. establish service requirements for all of the following:
   3.1 electrical supplies
   3.2 gas supplies
   3.3 fire equipment and alarms
   3.4 water supplies
   3.5 heating
   3.6 waste streams
   3.7 coolant supplies
   3.8 lighting
   3.9 other (please specify)
   3.10 pneumatic supplies
   3.11 environmental controls

4. establish new equipment and resource requirements against all of the following:
   4.1 off the shelf
   4.2 additional facilities in existing production areas (e.g., buffer stock)
   4.3 custom built
   4.4 storage (e.g., shelving, floor space)

5. agree sub-contractor/machine builder plans that include all of the following categories:
   5.1 cost breakdown
   5.2 construction design management (CDM)
   5.3 deliver schedules
   5.4 health and safety requirements
   5.5 performance guarantees
   5.6 acceptance criteria
   5.7 quality standards
   5.8 other (please specify)

6. construct a master plan that includes all of the following:
   6.1 key customer dates
   6.2 restricted access/barriers needed
   6.3 equipment/service inter-dependencies
Plan and manage the installation of the new product manufacturing process

6.4 in-house/new equipment delivery and resources plan
6.5 allocation of responsibilities
6.6 health and safety requirements
6.7 redundant equipment/services removal plan
6.8 key contact persons
6.9 delivery storage requirements
6.10 special access/transport requirements
6.11 other (please specify)
6.12 installation plan against agreed floor plan layout
6.13 critical activities

7 ensure that all plans comply with relevant regulations, standards and guidelines, from all of the following:
7.1 international
7.2 company policy and procedures
7.3 national
7.4 industry specific
7.5 manufacturer specific
7.6 statutory bodies

8 communicate with stakeholders and record installation plans in the relevant company information systems, by the following method:
8.1 verbal communication
     plus one of the following:
8.2 electronic mail
8.3 written or typed report
8.4 computer-based presentation
SEMPDI4_30
Plan and manage the installation of the new product manufacturing process

Developed by SEMTA

Version number 1

Date approved September 2006

Indicative review date December 2015

Validity Current

Status Original

Originating organisation SEMTA

Original URN [ORIGINURN]

Relevant occupations Technical Support roles involved in New Product Development and Introduction such as Design, Quality Assurance and Production Planning; Corporate managers and senior officials; Engineering and Manufacturing technologies; Engineering; Functional managers

Suite LEAN NPDI SUITE 4 2006; Engineering and Manufacture Suite 4

Key words Manufacturing, New, Product, Development, Introduction, NPDI, Process, Flow, Layout; Leadership; Engineering Manufacture