# Skills Assessment- Stair assembly

**Event 3 of 3**

## Criteria

### Unit code, name and release number

MEM09002 - Interpret technical drawing (1)

### Qualification/Course code, name and release number

MEM30319 - Certificate III in Engineering - Fabrication Trade (1)

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: *1.0*

Date created: *3 July 2018*

Date modified: *07/11/2019*

For queries, please contact:

*SkillsPoint – IMRS*

*Location – Block B Level 1 Hamilton TAFE Newcastle*

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RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your skills as would be required to interpret technical drawings |
| **Assessment Event number** | 3 of 3 |
| **Instructions for this assessment** | This is a skill based assessment and will be assessing you on your ability to demonstrate skills required in the unit.  This assessment is in 3 parts:   1. Practical 2. Observation checklist 3. Assessment Feedback |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking.  Ensure you have written your name at the bottom of each page of this assessment.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To successfully complete this assessment the student will be available at the arranged time to complete all the assessment criteria as outlined in the assessment instructions.  All parts of the observable task must be performed to a satisfactory level as indicated in the criteria section of the Observation Checklist.  All oral questions must be answered correctly to be deemed satisfactory in this assessment task; however, Assessors may ask questions to clarify understanding. |
| **What do I need to provide?** | Calculator, pens, pencil, eraser, PPE. |
| **Due date/time allowed/venue** | 75 minutes duration  Venues can be either, TAFE classroom, TAFE workshop facility, or an agreed workplace. |
| **Assessment feedback, review or appeals** | Appeals are addressed in accordance with Every Students Guide to Assessment. |

## Part 1: Practical

To complete this part of the assessment, you will be required to participate in a practical demonstration of how to complete a task or activity.

These practicals will be observed by your assessor, or can be digitally recorded and submitted as evidence.

Your responses will be used as part of the overall evidence requirements of the unit.

You should refer to the list of criteria in the Observation Checklist to understand what you need to demonstrate in this section of the assessment. This Checklist outlines the assessment criteria used to assess your performance.

Once completed you will need to submit this assessment and the tasks and activities you are required to complete to your assessor for marking.

**Contingency Management:**

While undertaking this task a number of unforeseen circumstances may arise. The assessor has the opportunity to question each learner to gather an understanding of how the student will respond to these events. Below is a table with examples of possible questions.

The assessor also has the opportunity in the observation checklist to record other relevant questions and responses in the table “Table 10.0 Additional Questions”

|  |  |  |
| --- | --- | --- |
| Scenario | Assessors question | Acceptable students response |
| Power failure in workshop | What is the correct action in the case of power failure? |  |
| Emergency evacuation | What do you do if an emergency evacuation drill happens during the assessment? |  |

## Specific task instructions

The instructions and the criteria in the tasks and activities below will be used by the assessor to determine whether the tasks and activities have been satisfactorily completed. Use these instructions and criteria to ensure you demonstrate the required skills and knowledge.

If this assessment requires you to record information, your assessor will provide you with an appropriate document/template.

This assessment requires you to complete checklists, answer questions, and perform associated calculations within 4 (four) tasks summarised below:

* Task 1 - Check and validate Documentation
* Task 2 – Read Standard Operating Procedures (SOP)
* Task 3 – Interpret Technical Drawing
* Task 4 – Compile a Material List and Cutting List

Your assessor will provide you with access to the documentation required to carry out Tasks 1 to 4 listed above. It is part of the assessment requirement that you; source, check, then validate the documentation as being correct.

When completing Tasks 1 to 4:

* Ensure that you are referring to the correct document ‘(s). Some questions will require you to access multiple documents
* Answer all questions and show working in the spaces provided on this assessment document
* **Do not mark or change the reference documents.** They must be returned to your assessor at the assessment completion and will be used for further assessment events
* Follow the Standard Operating Procedure 1.1
* Follow any additional work instructions provided by your assessor

**Task 1: Check and validate Documentation**

You will be given access to a set of drawings and a Standard Operating Procedure. The document, types, title and issue number required for this assessment are listed in Table 3.0 Document validation checklist below.

You are required to:

1. Source the documents from their location
2. Check and validate the document title and issue
3. Confirm this information is correct by responding Yes or No in the “Received/Validated” column of the Table 3.0 Documents validation checklist below.

**Table 3.0: Document validation checklist**

|  |  |  |  |
| --- | --- | --- | --- |
| *Document Type* | *Document Title* | *Issue* | *Received/Validated* |
| Standard Operating Procedure (SOP) | Engineering Technical Drawing Issue and Interpretation | 1.1 |  |
| Drawing | STAIR ASSY ISO ARRG’T  09204-T5-1 | B |  |
| Drawing | STAIR ASSY ORTHOGONAL ARRG’T  09204-T5-2 | B |  |
| Drawing | STAIRS ASSY FRAME DETAILS  09204-T5-3 | B |  |
| Drawing | STAIRS ASSY FRAME DETAILS  09204-T5-3 | C |  |
| Drawing | STAIRS ASSY HANDRAIL DETAILS  09204-T5-4 | B |  |

**Refer to the Drawings checked and validated in Task 1**

d) (PE2) Go to Table 4.0 Revisions and Amendments and complete the following:

|  |  |
| --- | --- |
| * Drawing Issue * Revision Date | * Revision Description * Reviser (Initials) |

**Table 4.0: Revisions and Amendments.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Drawing Number* | *Drawing Issue* | *Revision Date* | *Revision Description* | *Reviser (initials)* |
| 09204-T5-1 |  |  |  |  |
| 09204-T5-2 |  |  |  |  |
| 09204-T5-3 | B |  |  |  |
| 09204-T5-3 | C |  |  |  |
| 09204-T5-4 |  |  |  |  |

e) The document pack contains two (2) drawings numbered 09204-T5-3. Which of these drawings would be considered current and why?

|  |
| --- |
|  |
|  |

f) Refer to the drawing you answered as current above and in the space below write the:

1. hole size and
2. number of holes

to be drilled in the top flange of the staircase stringers.

|  |  |
| --- | --- |
| (i) |  |
| (ii) |  |

**Task 2: Read Standard Operating Procedure (SOP) .**

**Refer to the Document: SOP Issue 1.1 Section 5.0**

a) In table 5.0 below list three (3) potential safety hazards associated with drawing interpretation in a workshop area:

**Table 5.0 Hazard Identification**

|  |  |
| --- | --- |
| *#* | Potential Hazards |
|  |  |
|  |  |
|  |  |

**Refer to Refer to the Document: SOP Issue 1.1 Section 1.0**

*b)*  In table 6.0 below list three (3) requirements that must be checked when a drawing is issued:

**Table 6.0 Drawing Issue**

|  |  |
| --- | --- |
| *#* | Drawing Issue Requirements |
|  |  |
|  |  |
|  |  |

**Refer to Refer to the Document: SOP Issue 1.1 Section 2.0**

c) In table 7.0 below list two (2) safe work practices to follow when interpreting drawings

**Table 7.0 Safe work practices**

|  |  |
| --- | --- |
| *#* | Drawing Interpretation Safe Work Practices |
|  |  |
|  |  |

**Task 3 Interpret Technical Drawing.**

**Refer to Drawing 09204-T5-4 and the WEBFORGE STANCHION SPECIFICATONS below.**

Drawing 09204-T5-4 details the top Stanchion on the Stairs Assembly as WEBORGE (P) PLATFORM type.

a) Using the WEBFORGE STANCHIONS SPECIFICATIONS (extract) below right complete the following details in Table 8.0 for a Mild Steel Stanchion – Std:

* NB
* OD
* Wall Thickness

**Table 8.0: WEBFORGE Stanchion Details.**

|  |  |
| --- | --- |
| Refer to Catalogue | |
| NB = 40 mm |  |
| OD = 48.3 mm |
| Wall Thickness = 3.2 mm |

**Refer to Drawing 09204-T5-4**

b) How many Webforge (P) Platform Stanchions will be required for the Stair Assembly Handrails?

|  |
| --- |
|  |

1. How many Webforge (AM) Stair Stanchions will be required for the Stair Assembly Handrails?

|  |
| --- |
|  |

1. The angle for the Webforge (AM) Stair Stanchions is provided on the drawing as a slope diagram. In the space below provide the missing dimension for the slope diagram.

|  |
| --- |
|  |

1. The 32DN SCH 10 Top Rail of the Stair Assembly is supplied in 6.0 Metre lengths. How many lengths will be required to be ordered from the supplier to complete the top rail?

|  |
| --- |
|  |

1. Is the joint where the Top Rail passes through the Stanchion tacked in place or welded all round?

|  |
| --- |
|  |

1. Will the Top Rail be welded to the Stanchion in the workshop or on site?

|  |
| --- |
|  |

1. What Australian Standard will the Top Rail weld need to conform to?

|  |
| --- |
|  |

1. Will the Rail Joint be welded in the workshop or on site?

|  |
| --- |
|  |

1. How many bolts will be required to join the Handrails to the Stingers?

|  |
| --- |
|  |

1. What Australian Standard will the bolts need to conform to?

|  |
| --- |
|  |

**Task 4 Compile a Material List**

Drawing 09204-T5-T3 provides the details required to fabricate the Stair Assembly Frame, however a Material List is not shown. The table below has a partially completed Material List (left) and a partially completed Cutting List (right).

1. On the left side of Table 9.0 complete the Material List by entering the required details into the blank spaces
2. On the right side of Table 9.0 complete the Cutting list by entering the required details into the blank spaces.

**Table 9.0: Material List and Cutting List**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Material List | | | | | | Cutting List | | | |
| **Item** | **Description** | **Quantity** | **Material Grade** | **Material Type/Section** |  | **Length** | **Width** | **Thickness** | **Quantity** |
| Item 2 | Stair Tread |  | AS3678: 250 |  |  | 264 +25 + 25 = 314 |  | 13 |
| Item 2 | Top Landing |  | AS3678:250 | Diamond Plate | 1000 |  | 6 |  |
| Item 3 | LH Stringer | 1 | AS3679: 350 |  | 4231 + 600 = 4831 | NA | NA |  |
| Item 4 | RH Stringer | 1 | AS3679: 350 |  |  | NA | NA |  |
| Item 5 | Wall Plate |  | AS3679: 350 |  |  | NA | NA |  |

## Part 2: Observation Checklist

The Observation Checklist will be used by your assessor to mark your performance in any of the previous three event types. Use this Checklist to understand what skills you need to demonstrate in this section of the assessment. The Checklist lists the assessment criteria used to determine whether you have successfully completed this assessment event. All the criteria must be met. Your demonstration will be used as part of the overall evidence requirements of the unit. The assessor may ask questions while the demonstration is taking place or if appropriate directly after the task/activity has been completed.

Table 2 Observation Checklist

| Task # | Task/Activity Performed | S | U/S | Assessor Comments (Describe the student’s ability in demonstrating the required skills and knowledge) |
| --- | --- | --- | --- | --- |
| 1 | **Check and Validate Documentation**   * Select the six (6) documents listed in Table 3.0 from their location * Check and validate the document titles and issue * Complete Table 3.0 * Check the drawing amendments * Complete Table 4.0 * Answer questions (e) and (f) |  |  |  |
| 2 | **Read the Standard Operating Procedure (SOP)**  The Student:   * Read SOP 1.1 * Complete Table 5.0 * Complete Table 6.0 * Complete Table 7.0 |  |  |  |
| 3 | **Interpret Technical Drawing**  The Student   * Follow SOP 1.1 complies with WHS requirements and work instructions * Answer questions (a) to (k) * Complete Table 8.0 |  |  |  |
| 4 | **Compile a Material List and Cutting List**  The Student   * Complete Table 9.0 |  |  |  |

Table 10.0 Additional Questions

|  |
| --- |
| Additional Questions |
| Assessors may ask additional questions to clarify student understanding. List here any additional questions that were asked during this assessment event.  *Record all additional questions that were asked of the student during the assessment event.* |
| **Student Reponses to Additional Questions** |
| List here the student responses to any additional questions that were asked during this assessment event.  *Record the student responses to any additional questions that were asked during this assessment event.* |

## Part 3: Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***