Mechanical Fabrication

WSC2013\_TP05\_M2\_EN

Submitted by: Autodesk®

# Contents

This Test Project proposal consists of the following documentation/files:

|  |  |
| --- | --- |
| 1. WSC2013\_TP05\_M2\_EN.pdf (printed) | 1. Prints of all parts to be modeled |
| 1. All required assemblies and parts |  |

# Introduction

A manufacturer is designing an assembly line for folding and packing cardboard boxes. You will model components of a subassembly for the assembly line.

# Description of project and tasks

Review prints of the assemblies and parts, then model parts, frames, subassembly and assembly. Also, create exploded views and detailed drawings.

You have **6 hours** to complete the project.

# Instructions to the competitor

## OPEN AND REVIEW SUPPLIED PRINTS AND FILES

1. Prints of the required frame subassemblies and parts.
2. The supplied assemblies and part files are located in Z:\Day2\.

***MODEL AND ASSEMBLE THE PARTS***

1. Model the required parts and frames. Refer to the prints for the part names and dimensions of each part or frame.
2. Create the required subassembly using the printed data and data files for reference. All required dimensions are given, use your best engineering knowledge if you feel something is missing.
3. Create the required assembly using the printed data and data files for reference.

## CREATE DRAWINGS

1. To complete the drawings:
   1. On the first sheet, create an exploded, shaded isometric view of the complete 019310 assembly (do not explode subassemblies).
   2. Add balloons and a parts list. The list should have 4 columns, ITEM, QTY, PART NUMBER and VOLUME.
   3. On the second sheet, create an exploded, shaded isometric view of the SUB-199310 subassembly.
   4. Add balloons and a parts list. The list should have 3 columns, ITEM, QTY, and PART NUMBER.
   5. On the third sheet, create flat pattern drawings of parts 500538L, 500538R, 500446R, and 500504R. Add parts numbers and all necessary dimensions (without tolerance).
   6. On the same sheet, create a view of 500106-041\_EDGE. Add part number and all necessary dimensions (without tolerance). Add the weld symbol.

## CREATE ANIMATIONS

All animations must show the collapsing (showing assembly process) of the parts, be a minimum of 5 seconds and be saved as AVI files.

1. Create an assembly animation of the 019310 assembly.
2. Create an assembly animation of the SUB-199310 subassembly.
3. Create an assembly animation of the 500106R frame.
4. Create an assembly animation of the 500620R frame.

## REMARKS

1. For missing dimensions, approximate the value or check against matching parts.
2. Standard fasteners are required on SUB-199310 only.
3. All drawings must be printed on A2 size sheets.
4. All files must be saved using the competition file naming convention in the following folder: D:\Country code\Day2\.

# Marking scheme

|  |  |  |  |
| --- | --- | --- | --- |
| **CRITERION** | **SUBCRITERION** | **Objective** | **Subjective** |
| B1 | Parts and assemblies | 10.4 |  |
| B2 | Frame parts and assemblies | 1 |  |
| B3 | Fabrication drawing details | 4.9 |  |
| B4 | Drawing views and presentation | 7.7 | 1 |
|  | **Total**: | 24 | 1 |

# USEFUL DRAWINGS TRANSLATION

|  |  |
| --- | --- |
| As appeared in drawings | Translated |
| Aluminium |  |
| Center |  |
| Complete assembly |  |
| Edge |  |
| Fillet weld |  |
| Frame |  |
| Material |  |
| Mild steel |  |
| Rectangular |  |
| Required |  |
| Size for |  |
| Square |  |
| Stainless steel |  |
| Steel |  |