TEST PROJECT

Mechanical Engineering Design – CAD-Day2

ES18_T05_M1 _EN

TEST PROJECT – Craftsman Clamp

Task FOR DAY 2: DRAWINGS FROM A PHYSICAL MODEL

Maximum Allowed Time: 5 hours

Given:

1. The actual physical model.

2. The necessary measuring instruments.

   - Instruments for freehand sketching "Brought by the competitor"
   - Measuring instruments (Steel rule, Vernier caliper, Universal radius gauge (convex and concave) and Bevel protractor-"Brought by the competitor".

3. Personal computer with Autodesk Inventor 2017 version installed and provided with template layouts A4, A3, A2 and A1 in metric units.

4. Printer/plotter "A4, A3, A2 and A1 size".

ASSIGNED TASK:

1. Making files and layouts from dimensions taken from a physical component (Spray Gun) to fully describe all the objects comprise it.
2. The competitor can produce sketches on paper that can serve as the basis for producing the 3D model of the physical object. These will not be marked.

Output:

1. Create new project named Craftsman Clamp.
2. Draw a solid part of the object shown below.
3. Create 2D views and insert all the necessary dimensions required to draw the solid model for each parts and assembly.
4. Set the scale as per the values shown in the table below for the 2D.
5. Select proper materials and color for the different objects
6. Complete the title block for all the drawings
7. Create presentation file for the objects.
8. Add balloon and part list on the assembly drawing details.
9. All dimensions should be placed using one decimal place.

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	Body
2	1	Body Cover
3	1	Clamp Spine
4	1	Upper Jaws
5	1	Holder
6	1	Pusher
7	2	Pin
8	1	Reverse Handle
9	1	Forward Handle
10	1	Upper Jaws Rubber
12	1	ISO 7049 - ST 2.9 x 9.5 - C - H
13	4	ScrewGB 845-85 - ST3.5 x 9.5

1. Note: See Fig.1 for the parts names and Fig.2 for the expected layout of views and 3D shaded drawing. Note that this is only an example and you are free to decide the number of views, their layout, the projection method and the scale factor.

   - Some internal details and external features are not required.
   - You have to assume any unmeasurable dimensions.
   - Always save your drawings in Day 2 folder on the desktop. **Save your work regularly**. The skill management team is not responsible for the lost data due to computer crashes.

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	Body
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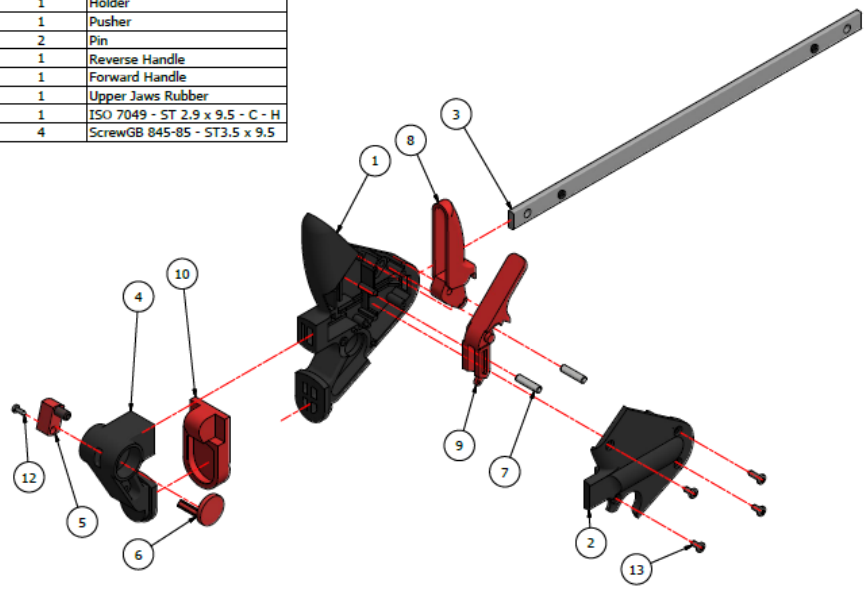

Designed by	Checked by	Approved by	Date	Date
ESKILLS				4/19/2018

Clamp

Edition

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