



MAKING A PORTABLE WORK- BENCH.

PRESENTATION OF THE PROJECTX-FINAL LEVEL 1.



CENTRO DE FORMACIÓN PROFESIONAL

A PORTABLE WORK-BENCH



FOR USE IN THIS CORE AREA: general and particular.

- ▶ GENERAL /
KNOWLEDGE:
MECHANICAL
- ▶ PARTICULAR /
ACTIVITIES:
ASSEMBLY,
QUALITY AND
MESUREMENT



LEARNING OUTCOMES. Common to be shared.

- ▶ 1. Applying MIG MAG welding procedures and subsequent verification of the welding mechanical properties
- ▶ 2. Applying non-destructive testing of materials
- ▶ 3. Bending plates.



DURATION

- ▶ Theory: 3 hours
- ▶ Practice: 25 hours



THEORETICAL OBJECTIVES AND ACTIVITIES

OBJECTIVES

1. Interpretation of plans.
2. Draw on the plan the work studied and designed (1)
3. Electric welding and MIG / MAG
4. Cutting
5. Quality control

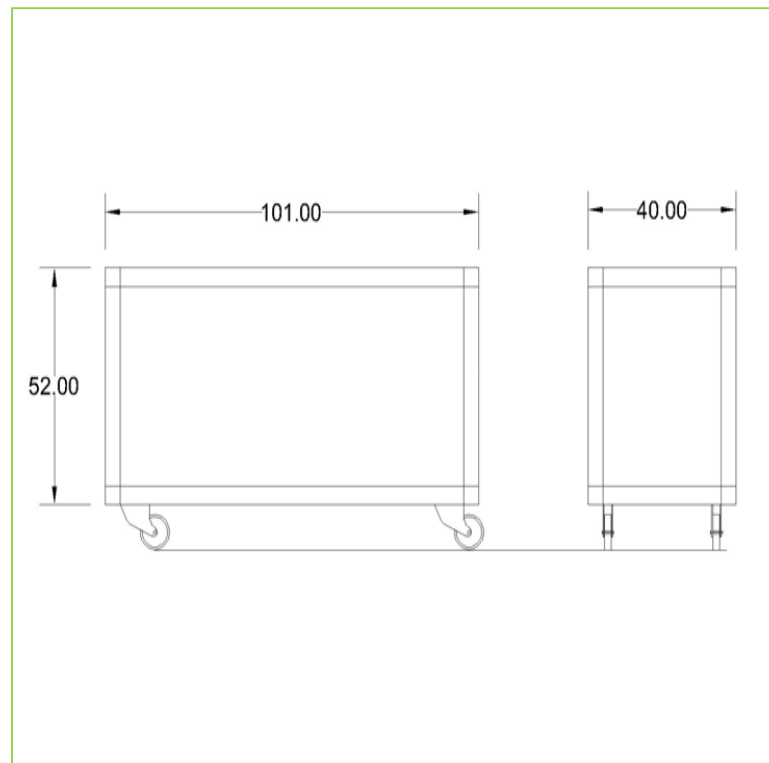
ACTIVITIES

1. Evaluation
Questionnaire
2. Draft of an existing portable bench in classroom applying theoretical knowledge (plans and design)
3. Multiple-choice test

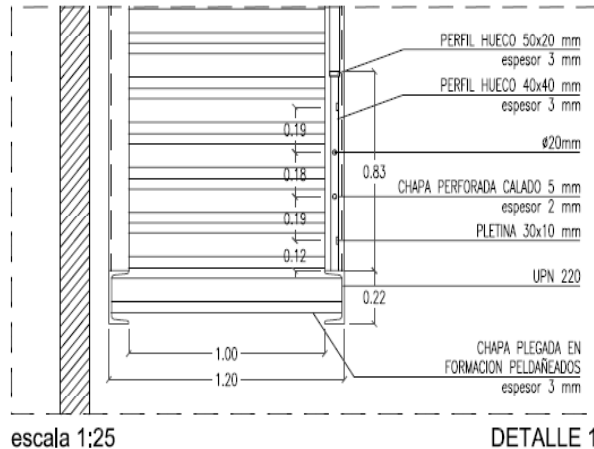
PRACTICE.

Brief description and pictures.

According to a portable bench plane and outline given to the student, he has to make a good interpretation of the plane, pick the necessary materials and elements, do the previous operations to the assembly, prepare properly the workstation, assembly and welding the elements and do the final quality verifications according with the Quality Plan.



PRACTICE. Activities.



- **First:** Interpretation of the portable bench plane (definition): width, length and height.
- **Second:** Collect all the materials and make a budget. **He should draw the cutting plan before.**
- **Third:** Cutting and preparing the components.
- **Fourth:** Assembling and dotting welding.
- **Fifth:** Welding.
- **Sixth:** Clean and sand.
- **Seven:** Quality check: measurements, tolerances, quality of the welding, etc.

| LISTA MATERIALES | | |
|---|------|---|
| PEDIDO COMPRAS | | DESPIECE CORTE MATERIALES |
| MATERIAL | Uds. | |
| UPN 220 | 5 | 4 uds. perfiles sin corte. (1 ud.) desplazado 2 uds. long. 1,00 m. + 2 uds. de 0,50 m. |
| □ 50.20.2 mm. | 3 | 1 ud. long. 2,88 m. + 1 ud. long. 2,85 m + 1 ud. 0,70 m. |
| □ 40.40.2 mm. | 5 | 8 ud. long. 0,83 m. (cortado con inclinación angulo escalera) |
| □ 30.10.2 mm. | 5 | 8 ud. long. 0,88 m. + 4 ud. long. 0,90 m. + 2 ud. long. 0,71 m. + 2 ud. long. 0,26 m. |
| ∅ 20 mm. | 5 | 8 ud. long. 0,88 m. + 4 ud. long. 0,90 m. + 2 ud. long. 0,71 m. + 2 ud. long. 0,26 m. |
| CHAPA CORRUGADA 1000.2000.3 mm. | 4 | 17 uds. long. 0,40 m. + 1 ud. long. 1,10 m. |
| CHAPA PERFORADA 1000.2000.3 mm, calado ∅ 5mm, Intercalado 10 mm. | 2 | 4 uds. long. 2000 x 500 mm. |

PRACTICE ACTIVITIES.

- **Third:** Cutting and preparing the components.



- **Fourth:** Assembling and dotting welding.



FIFTH. Welding.

- Fifth: Welding.



- Sixth: Clean and sand.



PRACTICE ACTIVITIES.

Seventh: Quality check: measurements, tolerances, quality of the welding, etc

