CLAIMS

1. System for moving objects positioned in a closed space, characterized in that it comprises:
at least one manipulator (3), adapted to grip and orient the aforesaid objects in the desired positions;
at least one overhead-travelling-crane mechanism (2), adapted to move said manipulator in said closed space in at least two different directions substantially horizontal,
an electronic processing unit, controlled by an operator, which is able to determine electronically and automatically the movements of the overhead-travelling-crane mechanism and of the manipulator.

2. System according to claim 1, wherein the overhead - crane mechanism (2) basically comprises at least one pair of longitudinal guides (21) sliding on which is at least one pair of transverse guides (22), on which the manipulator (3) in turn slides.

3. System according to claim 1, wherein the manipulator comprises a sliding plate (31), which proceeds on the transverse guides, an elongated body, constrained to the sliding plate (31) by means of a circular joint (32) that enables rotation of the manipulator about its longitudinal axis.

4. System according to claim 1, wherein the manipulator comprises gripping means for one of said objects, which

include a plurality of pliers (34) that can be moved along the longitudinal axis of the manipulator.

5. System according to claim 4, wherein the pliers are moved by means of linear guides (35) so as to enable gripping of objects of different sizes.

6. System according to claim 1, wherein the manipulator comprises positioning means comprising a bottom resting plate (36) and a top guiding device (37), adapted to enable resting and proper positioning of the objects in the manipulator.

7. System according to claim 1, wherein the manipulator has an access interface for the operator comprising a control joystick (39) equipped with control pushbuttons so as to enable the operator's direct control, who can determine and follow the movements of the manipulator in the closed space.

8. System according to claim 1, wherein the manipulator is provided with proximity sensors adapted to prevent its unexpected contact with objects.

CLAIMS

1. System for moving objects positioned in a closed space, comprising:

- at least one manipulator (3), adapted to grip and orient the aforesaid objects in the desired positions, comprising gripping means for one of said objects;
- at least one overhead-travelling-crane mechanism (2), adapted to move said manipulator in said closed space in at least two different directions substantially horizontal,
- an electronic processing unit, configured to be controlled by an operator, which is able to determine electronically and automatically the movements of the overhead-travelling-crane mechanism and of the manipulator. said system is characterized in that:
- said gripping means include a plurality of pliers (34) that can be moved along the longitudinal axis of the manipulator by means of linear telescopic guides (35) so as to enable gripping of objects of different sizes;
- the manipulator comprises:
  - positioning means comprising a bottom resting plate (36) and a top guiding device (37), adapted to enable resting and proper positioning of the objects in the manipulator;
  - a pair of movable forks (38) adapted to permit the drawing of the object positioned in a closed space.

2. System according to claim 1, wherein the overhead - crane mechanism (2) basically comprises at least one pair of longitudinal guides (21) sliding on which is at least

one pair of transverse guides (22), on which the manipulator (3) in turn slides.

3. System according to claim 1, wherein the manipulator comprises a sliding plate (31), which proceeds on the transverse guides, an elongated body, constrained to the sliding plate (31) by means of a circular joint (32) that enables rotation of the manipulator about its longitudinal axis.

4. System according to claim 1, wherein the manipulator has an access interface for the operator comprising a control joystick (39) equipped with control pushbuttons so as to enable the operator's direct control, who can determine and follow the movements of the manipulator in the closed space.

5. System according to claim 4, wherein the manipulator comprises a checking display (40), which is equipped with control pushbuttons.

6. System according to claim 1, wherein the manipulator is provided with proximity sensors adapted to prevent its unexpected contact with objects.