

## THE MC400 NARGESA TUBE AND PROFILES BENDER IN ITS WORKPLACE

In Prada Nargesa we are interested in the interaction between our machines and the blacksmiths who use them, in the day to day of our clients, their concerns, their proposals for improvement ...

For this reason and to see this interaction firsthand we have visited the smithy of one of our clients to share a working day with him.

In this case we have followed the manufacture of a spiral staircase. This product is highly valued due to the complexity in its manufacture and the fact that they are unique objects made to measure.



### ► The manufacturing process of a spiral staircase is as follows:

1. Draw the spiral staircase in real size on the floor to check the measurements and distances between steps.



2. Draw a sketch on the scale of the elevation to check that at all times we have 220 cm between the overlapping rungs.



3. The top of each step is marked on the central tube of the staircase.



4. A special tool is anchored on the outside of the step. This makes stop at the front and side of the step and tells us where to put the next.



5. We use a round square made to measure that we fix to the tube, where the step will rest while we fix it.



6. Place the step making stop on the tooling and the round bracket.



7. We level the step so that it is completely parallel to the ground.



8. The step is fixed to the central tube with four welding points.



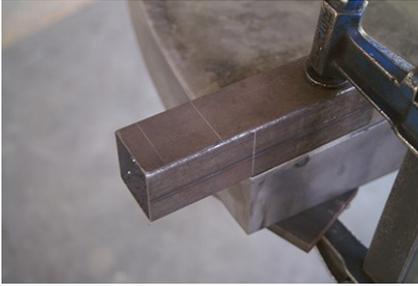
9. With smooth and controlled blows or small pieces of wire the deviation that may be corrected is corrected.



10. Proceed to permanently weld the step to the central tube.



In this way we fix all the steps up to the proposed height.



Next we have to manufacture the handrail of the spiral staircase. We do it by performing the following procedure:

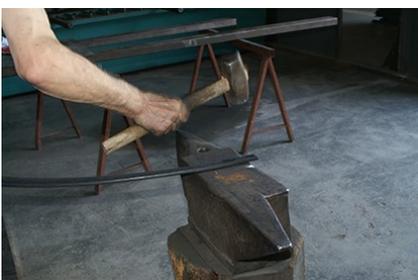
1. A tooling to which we mark the distance and the thickness of the handrail is fixed to the steps. These pieces allow to adjust the railing in an exact way.



2. The MC400 Tube and Profile Roller is in charge of curving the handrail, giving it the exact shape without damaging it.



3. Check that the railing fits with the marks of the tooling.



4. The handrail is twisted with a mallet to give it the perfect curvature.



The secret to bending the railing both in the tube and in the handrail is to leave the rollers or wheels of the rollers free. That is to say if we introduce the tube by the end of the right, the roller of the left part of the machine must be without any type of subjection so that the rail of tube or handrail can take the suitable inclination. The tube of the rail comes out bent in a spiral form when being forced by the lateral supports.