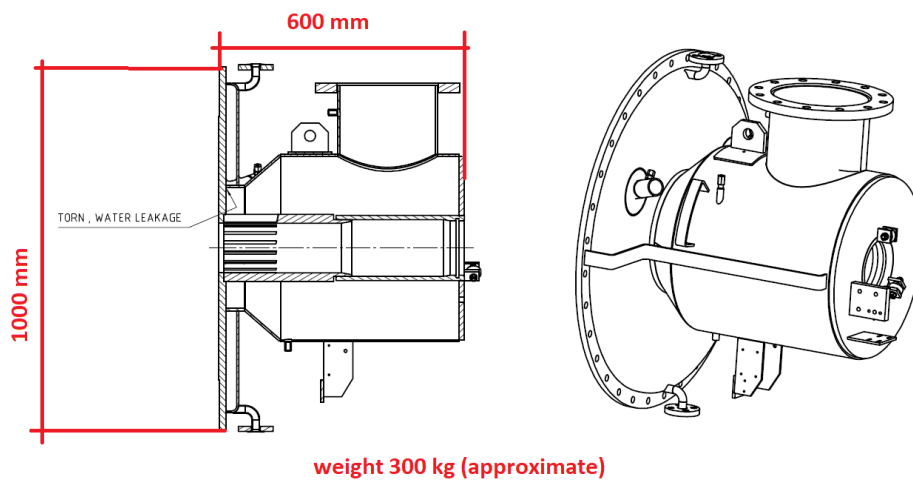


Burner Cover repair

STEP 1 - Situation

Repair of an IGS Generator Burner Cover as received information.
The Cover had some cracks and the water penetrate the furnace from the cooling chamber.

The Vessel required a suitable repair and a final hydraulic pressure test of Cover.



Visible cracks on the pilot burner hole and peep hole, view from bottom plate of cooling chamber

STEP 2 - Challenge

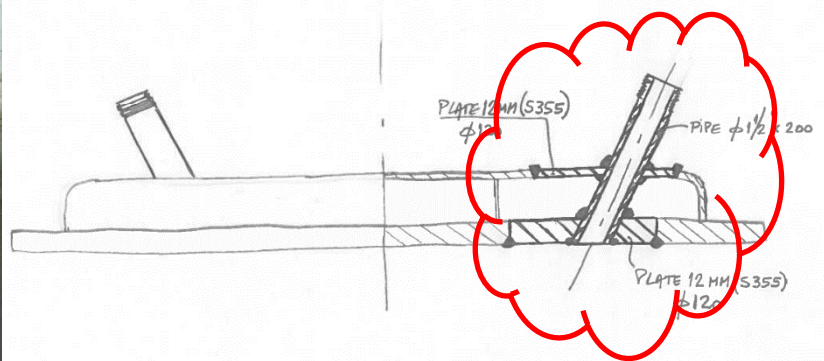
STEP's goal was to identify and successfully repair all cracks. The bottom cover plate was inspected with dye penetrant and found a lot of deep cracks, impossible to remove one by one. Due to material deterioration around the main cracks, it was decided to remove the damaged alloy pieces, replacing the existing pipe branch and re-building a new ones.



A Repair Procedure was previously prepared by STEP and approved by Client.

STEP 3 - Action

It was decided to fabricate a new part with steel plate S355 thk 12 mm and 1 1/2" CS tube, replacing and welding it on the cover as per below sketch



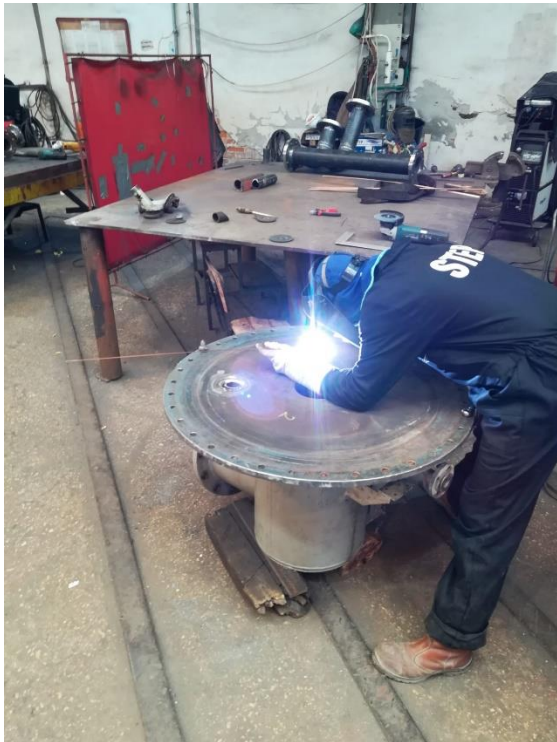


Removal of the pilot and peep pipes, including the steel damaged areas.



Preparation of the new pipe branch and other parts.





Welding of the new pipe branch, with TIG welding process, carried out by a certified welder.



After welding all welds seams were inspected with dye penetrant. No defects were found.



Finally, the hydraulic pressure test. No leaks were detected.

STEP 4 - Result

The repair was successfully concluded with a Hydraulic Test with an acceptable result. The Burner Cover was delivered onboard vessel. The customer was pleased with the repair job. Another successful completion.