

Figure 1: Breakup of the parabola into 54 panels

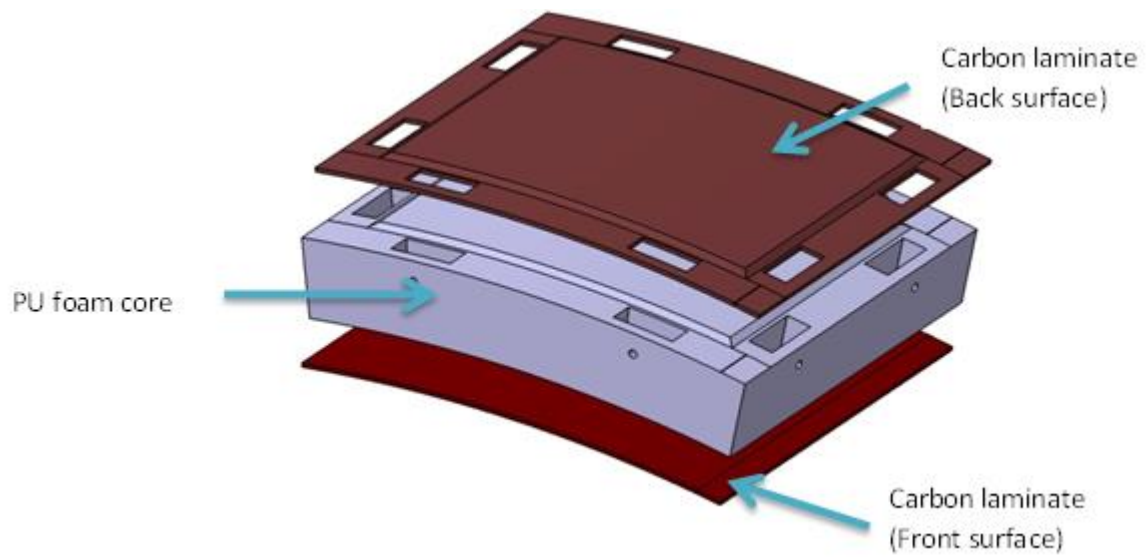


Figure 2: Individual panel design

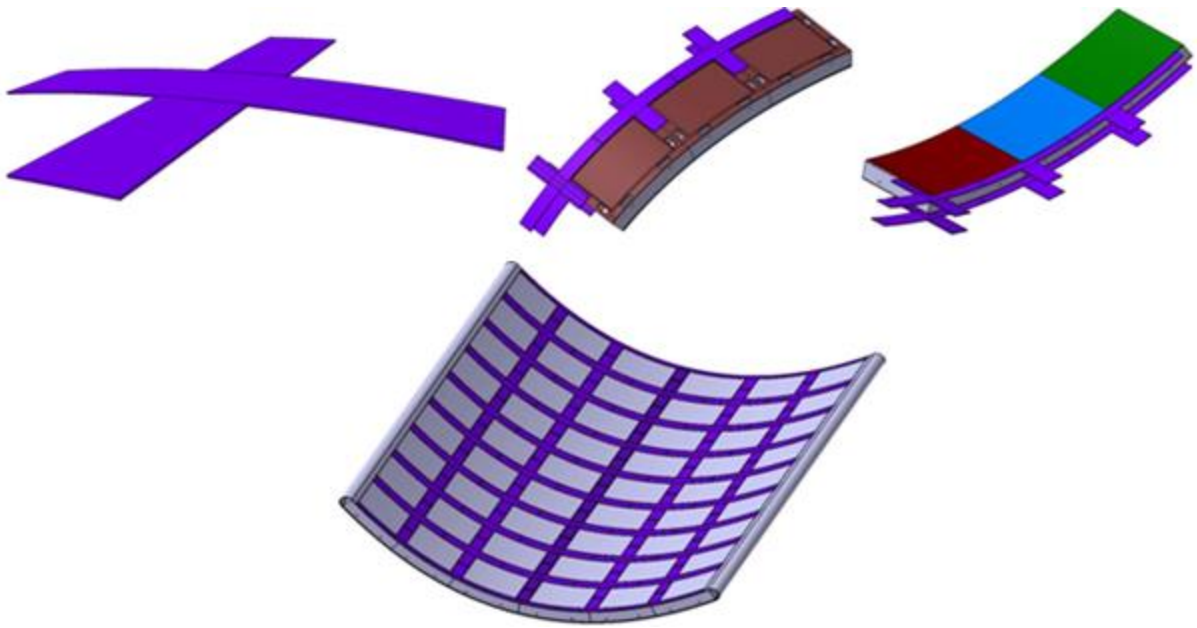


Figure 3: Stiffeners design and positioning between the panels

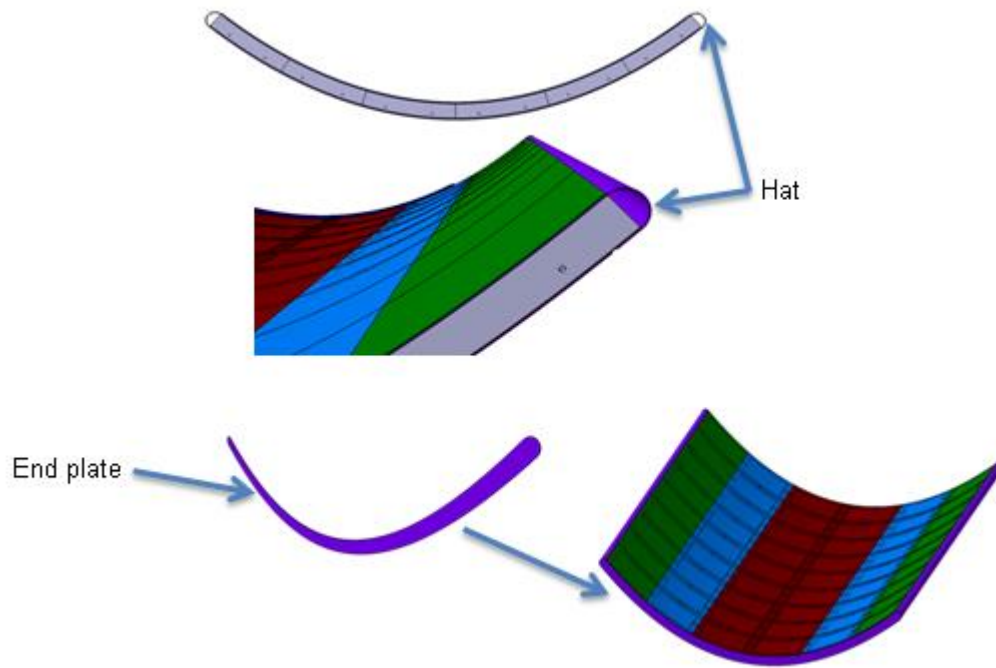


Figure 4: End hat and End plate designs and positioning in the parabola structure

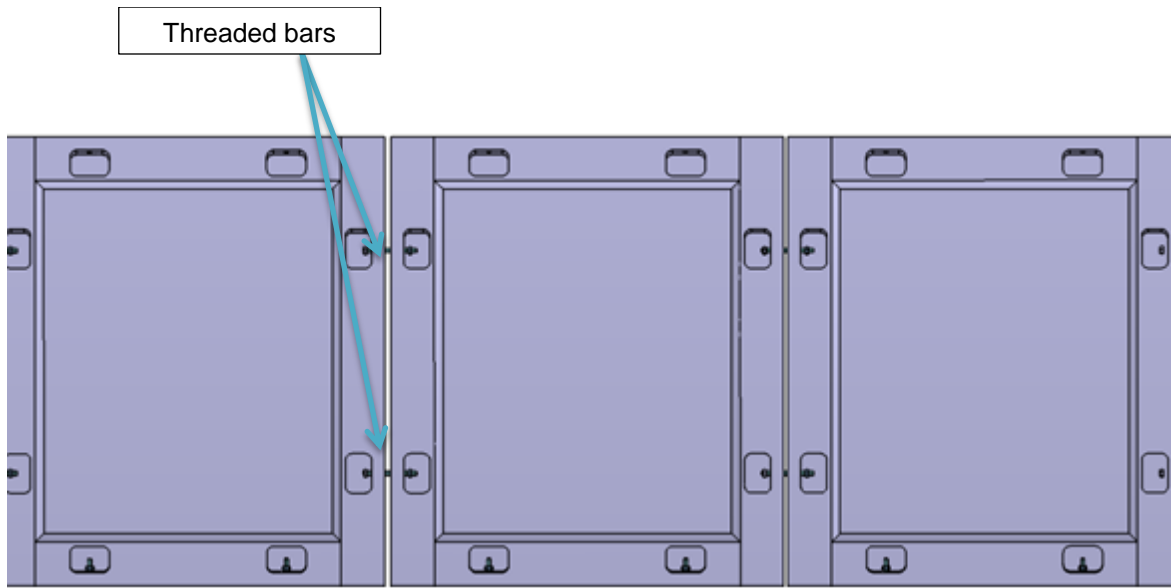


Figure 5: Threaded bars between panels

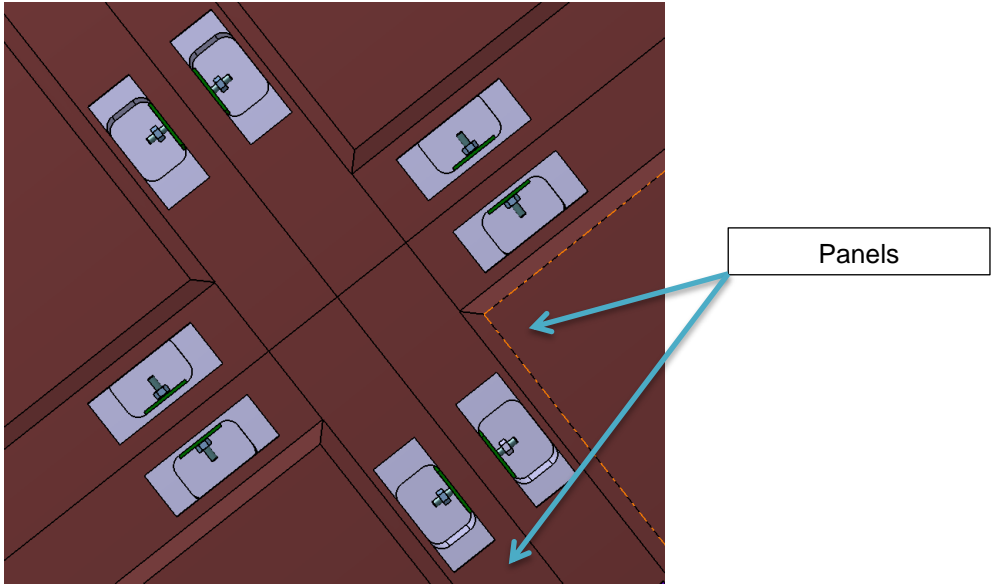


Figure 6: Threaded bars at panels junction

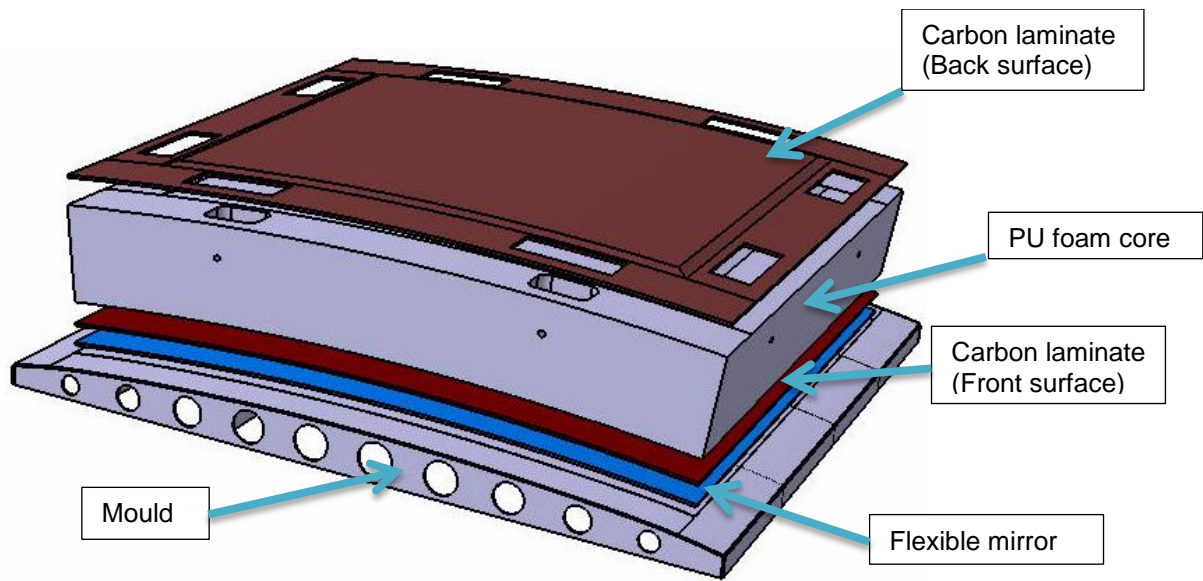


Figure 7: Lay-up of composite panel with flexible mirror

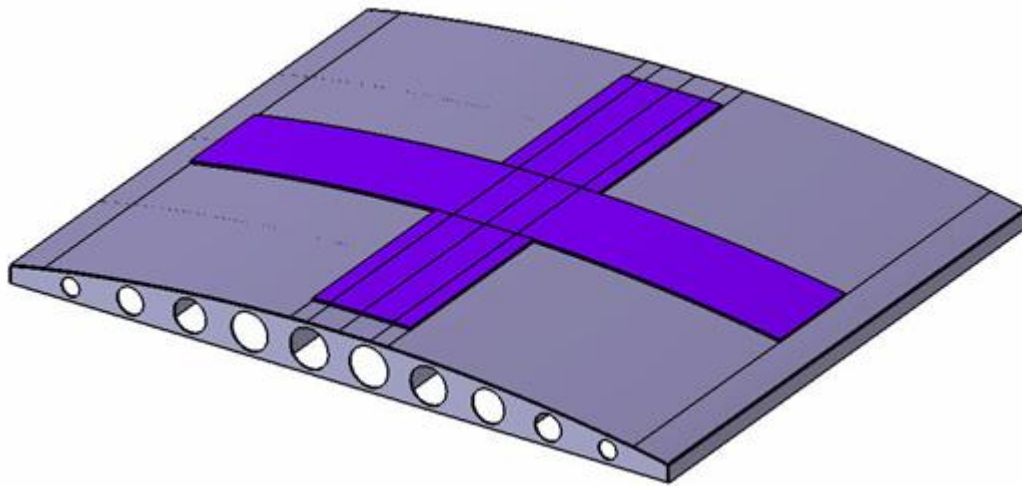


Figure 8: Stiffeners manufacturing layout

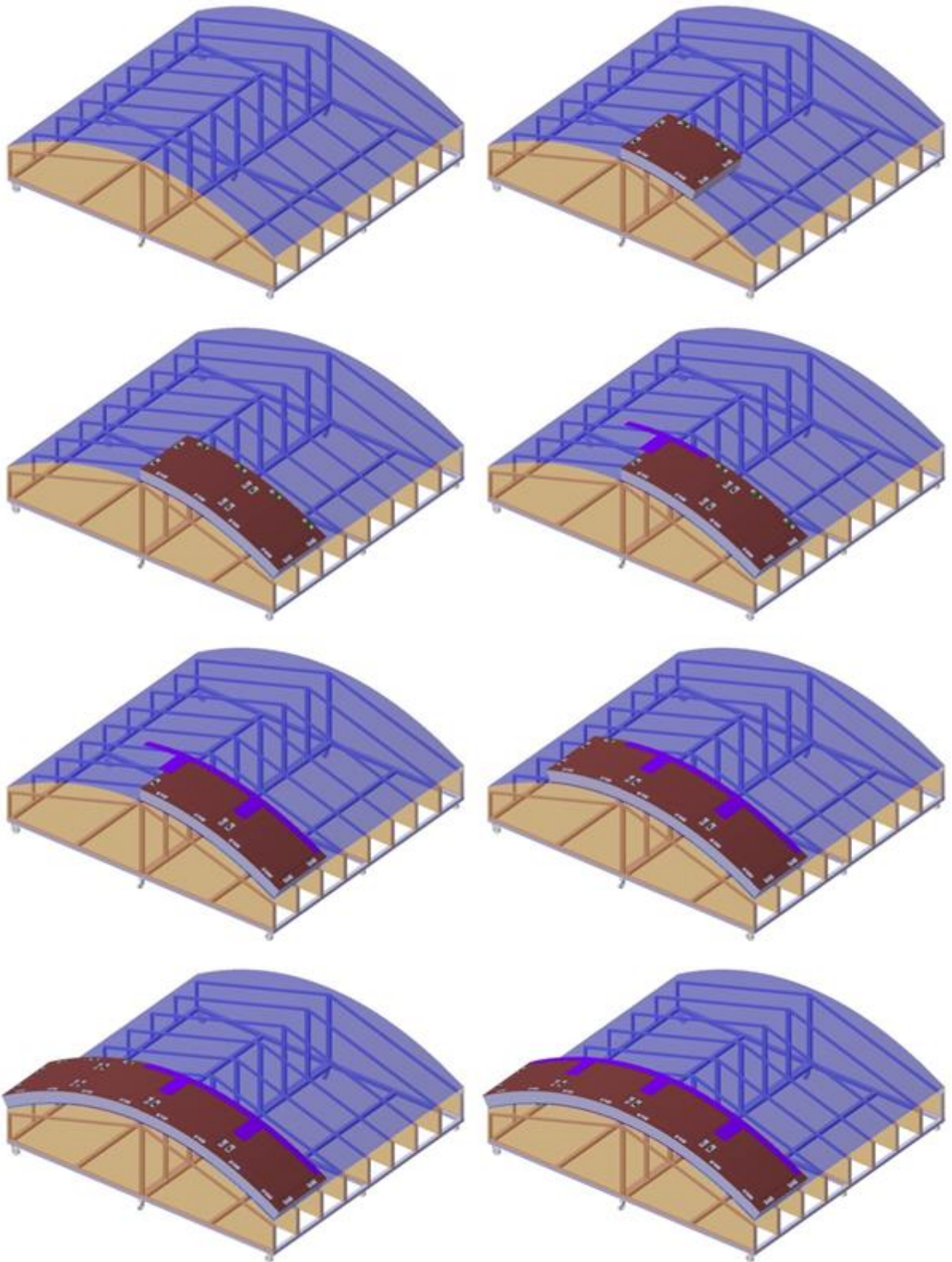


Figure 9: The assembling tool is a replica of the parabola's surface and will receive the different panels on top of it. The first and second panels are aligned with the references engraved in the tool. Once both are in position, the stiffeners are allocated as means of assembling and for loads transferring between adjacent panels. With stiffeners allocated in one side, the next central panel is positioned to build the second arm or the parabola. Finally, the second arm is completed. The process continues until the whole structure is complete.

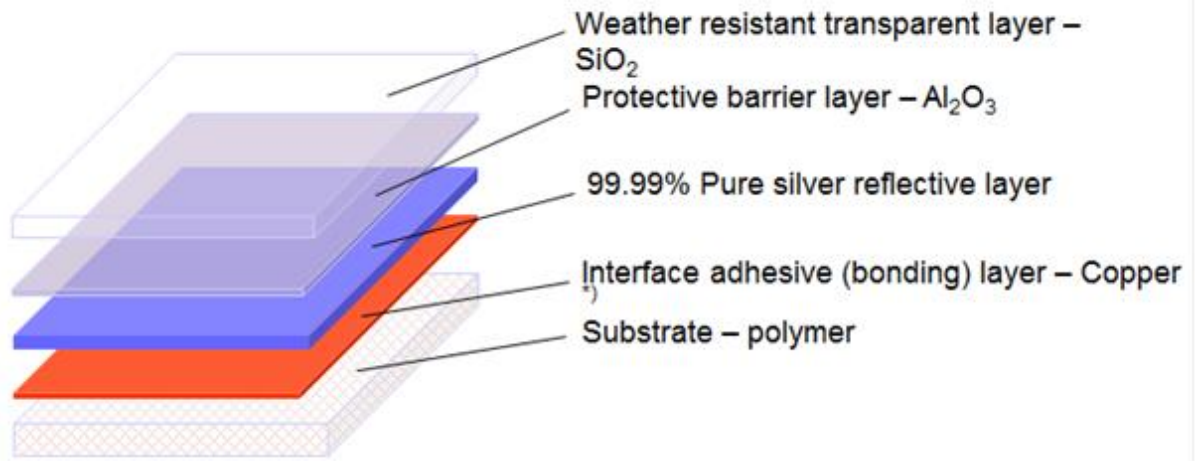


Figure 10: Selected Coating layered structure

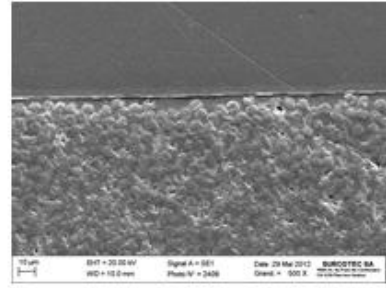
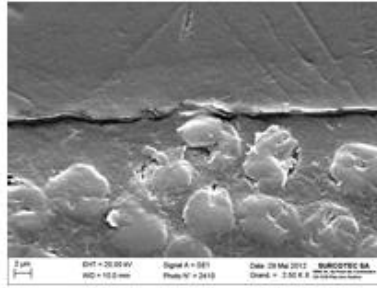
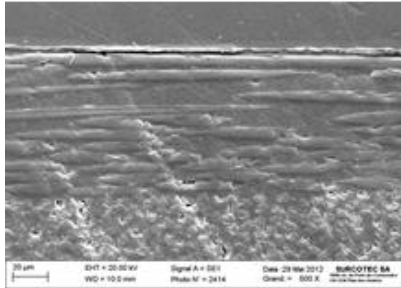
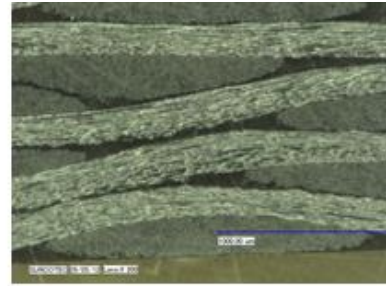


Figure 11: Deposition of Ag to composite samples and corresponding microscopy in order to investigate the interface

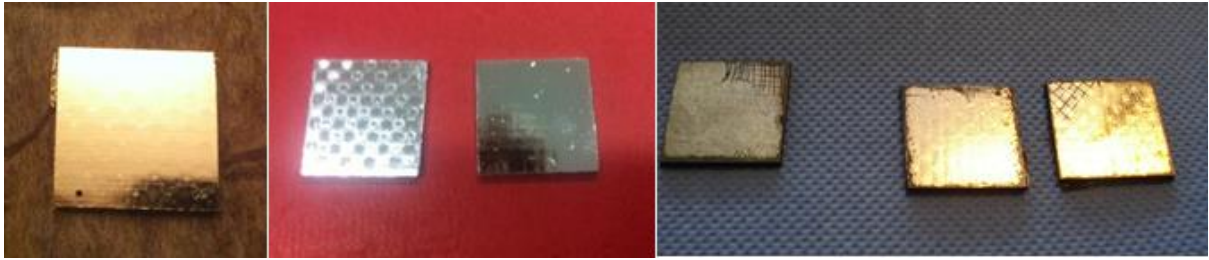


Figure 12: From left to right: i) PVD deposition of Ag, ii) chemical deposition of Ag, iii) sulfonation tests on Ag reflective coating without protective layer



Figure 13: Deposition of PVD Ag reflective coating on thin glass substrate as protective layer (left photo) and on polymer foils as protective layer (right photo)



Figure 14: West end of collector row and bearing with shaft for attaching the prototype



Figure 15: Plate to connect between anchors and pylon an pylon on left side, bearing on right side