

## **SYSTEMS AND METHODS FOR AUTOMATED WELDING**

### **ABSTRACT**

An automated welding system includes a mounting platform, a welding tool, an imaging device configured to acquire data associated with an object, and a controller. The controller is configured to receive the acquired data, determine an area to be welded in the acquired data, retrieve stored master model data associated with the object, and compare the acquired data to the stored master model data to identify a master model area in the acquired data. The controller is also configured to mask the master model area in the acquired data, such that the master model area is excluded from the area to be welded, and generate control instructions for controlling at least one of the mounting platform and the welding tool to weld the area to be welded.

[Figure 1]