Test Case # 5: Weld Quality Test

Test Writers: Branden Driver						
Test Case Name:		Weld Quality Test #1			**Test ID #:**	3MP-Weld-01
Description:		This test will check the quality of the weld across a variety of currents, wire speeds, and CNC movement speeds			**Type:**	
Tester Information						
	Name of Tester:				**Date:**	
	Hardware Ver:	Display V1.0, Main Board V1.5, Sensor V1.0			**Time:**	
	Setup:	Ensure both welder and CNC are ready to use. Have at least one 1/8" baseplate on hand for each version of test you wish to run. In LinuxCNC, open file "m100". This file is a G-code program that will print seven 1-inch lines, each at a different CNC movement speed.				
Step	**Action**	**Expected Result**	**Pass**	**Fail**	**N/A**	**Comments**
1	Set current level	Current level selected				
2	Set wire speed around 2	Wire speed selected				
3	Run program m100	Printing will begin				
4	During weld, run droplet spacing program	Program will output wire speed from encoder and average droplet spacing				
5	Quickly record both wire speed and average droplet spacing	Data acquired				
6	Repeat steps 4-5 for each of the seven welds of the program	First run is complete				
7	Adjust wire speed to 4	Welder ready for next run				
8	Run program m200	Print will continue on same plate, next to previous run				
9	Repeat steps 4-6	Data acquired for all 7 welds, 2nd run is complete				
10	Adjust wire speed to 6	Welder ready for next run				
11	Run program m300	Print will continue on same plate, next to previous run				
12	Repeat steps 4-6	Data acquired for all 7 welds, 3rd run is complete				
13	Adjust wire speed to 8	Welder ready for next run				
13	Run program m400	Print will continue on				

		same plate, next to previous run				
14	Repeat steps 4-6	Data acquired for all 7 welds, 4th run complete				
	Adjust wire speed to 8	Welder ready for next run				
	Run program m400	Print will continue on same plate, next to previous run				
	Run program m400	Data acquired for all 7 welds, 5th run complete				
	Overall Test Result:					