Attachment I - First Article Inspection Document

CAL POLY
SAN LUIS OBISPO

FIRST ARTICLE INSPECTION SHEET	
NAME:	Robyn Ribet
PART:	Business Card Holder
DATE:	10/26/2018
DRAWING NUMBER:	IME 335 CNC PROJECT #1 F.A.I.R DRAWING

Dimension ID	Description	Nominal Size	Limits	Actual	Device	Comments	Pass/Fail
Width (A)	Width of the part measured with a dial caliper.	2.250"	± .003"	2.254"	Dial Calipers	The part is slightly oversized, this is possibly due to wear on the end mill over time.	Fail
Length (B)	Length of the part measured with a dial caliper.	5.500"	± .003"	5.504"	Dial Calipers	The part is slightly oversized, this is possibly due to wear on the end mill over time.	Fail
Step Height (C)	Step height was measured using a dial caliper to measure the depth.	.605"	+ .005" - .000"	.605"	Dial Calipers	The height of the step passed and matched the nominal size.	Pass
Flatness (D)	Flatness was measured with a test indicator on a microflat surface. The part was elevated evenly using three jack screws.	N/A	.002"	.001"	Jack screw set, test indicator, surface plate	The flatness varied by one thou over the top surface and fulfilled the form tolerance requirements.	Pass
Chamfer (E)	Chamfer was measured using optical comparitor.	.025" x 45°	± .005"	.047"	Optical Comparitor	The chamfer was significantly too large which was due to the flat tip on the spot drill. This gave an inaccurate z height for the assumed placement of the spot drill tip.	Fail
Corner Radii (F)	Corner Radii were visually checked with a radius gage.	.125"	± .005"	Visual Pass	Radius Gage	The radius gage visually fit around the corners with no obvious gaps.	Pass
Corner Radii (F)	Corner Radii were measured using the optical comparitor to get a numerical radius value.	.125"	± .005"	.129"	Optical Comparitor	The optical comparitor measured three points to create an arc. The arc radius was slightly over-sized due to tool wear.	Pass
Overall Height (G)	Height of the part measured with a drop test indicator on a microflat surface.	.74"	± .01"	.743"	Surface plate, drop indicator	The overall part height was too high by .003". This was likely caused by error in touching off tools and tool wear.	Pass