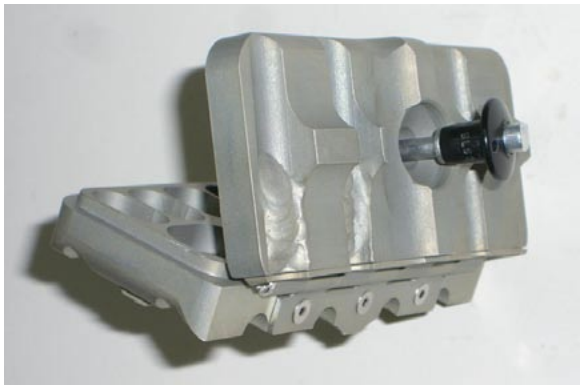


BPL Procedures Doc. 0008-0324-001
****
Production Run: Prototype
Number: 001
Refs: BPL business/BPL Manufacturing/watercolor box

****
PART NAME: Portable Aqueous Medium Stowage and Deployment Unit (Pamsdu)
ASSEMBLY NAME: Art Application System (AAS) - 001
DRAWING REF: skb.008.02
DATE: 24 March 2008/20 August 2008
LOCATION: BPL New Hampshire Facility, in the blue bag on the floor next to the stack of paintings upstairs, in the room on the right, as you go up.
****
ASSET EMPLOYMENT:

Tools:

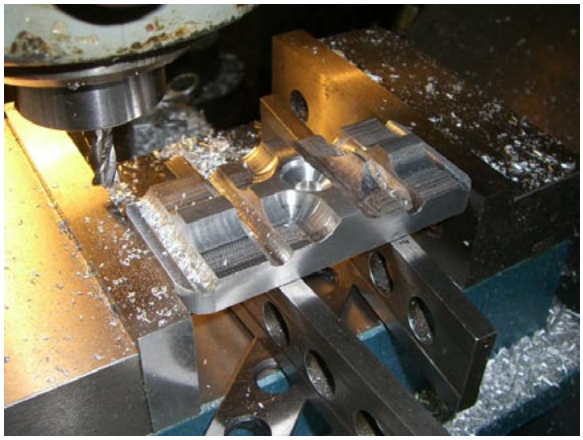
Delta Chop Saw, Induma Mill, Generic Chinese Drill Press, Miller TIG welder, Evan's sandblaster (see Temporary Loan Requisition form 0006-001), taps, files, band-aids, chemical application apparatus.
Materials:
Aluminum block, 3 X 6 X .75", 2pc., unknown alloy from Buffum's scrap yard, NH; Aluminum piano hinge, .50 X 6", Mil.Spec.20001-3; Stainless machine screws, FH 4-40 X .50", 7 pc.

Processes:

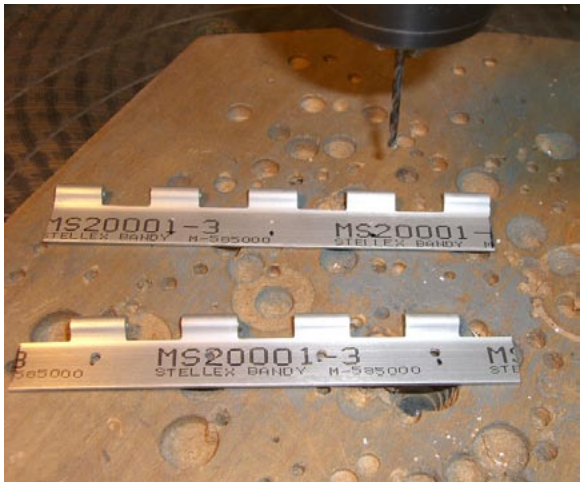
Rough cut blanks, Mill to size, cut hinge, drill, tap, mill pockets, repair milling errors by welding, sandblast, etch, treat with Alodine.

Procedure:

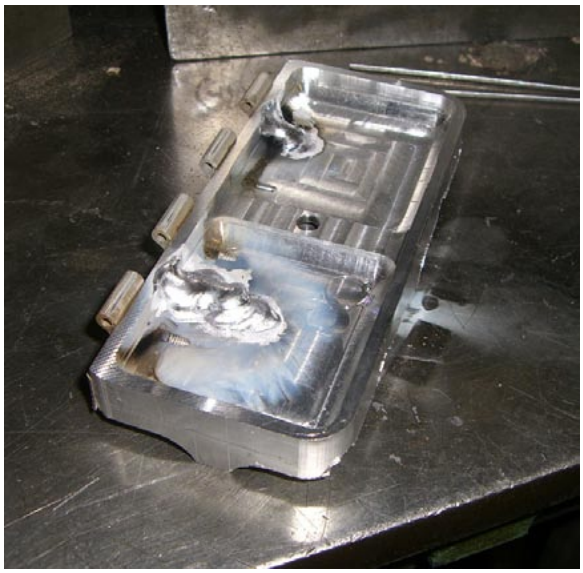
Actual procedures should be amended, based on the experience of the machine shop's errors. While it would be easy to say that the main mistake was a lack of precision in measuring, that would not be altogether truthful. In fact, the true cause of what really went wrong is much more fundamental. The machine department is getting pretty fed up with being given assignments with sketchy or non existent parameters. We would appreciate real drawings, with scales and numbers on them, so that we can figure out the order of machining operations. Vague notions about functionality and instructions to 'just see if it works' lead to inferior finished products. Even though this thing is marked 'prototype', it would be much more functional and reliable and have cost less to make if it was preceded by some kind of thought or planning process. In fact, there's really no point in logging all the things we had to do to make this device, since every step would have to be changed for the "real" one. I can't think of one event that I would not have to radically alter if we were to try to bring this thing into a production scenario. But, since I have to fill out this form and I will have to do it all over again if I don't list the procedure in some way, I will try and drag it out of my memory. It will be attached to this document upon submittal.



Testing:



AAS-001 was filled with a semi liquid art medium composed of various pigments, gum arabic, and water, with different colors assigned to different recesses let into the interior of the box. The Push-Pull pin was tested 10 times and functioned nominally, holding the box firmly closed and also providing an anchor for holding the box when opened. The box was dropped accidentally several times and this seemed as good an engineering test as any. The aluminum oxide coating, created with 'Alodine' chromic acid, seems fairly durable, and has a nice color too. Hinges work nominally. The box was sent on BPL-002, Manufacturing Mission to China, and performed as expected, used in the production of over 56 paintings during an experimental outsourcing of labor between April and June, 2008. The dry and hot climate of central China caused the aqueous medium to dessicate more quickly than control units using a cheap white plastic tray. Dust from the Yellow river did not affect the opening and closing of the unit. Occasionally, art medium would migrate into the lip that surrounds the recesses, and would dry there, causing pigment migration issues upon redeployment of the unit. Recommendations for design changes to follow.



Storage:

The unit was returned to the Research Node in New Hampshire in good condition, and is being kept in a Delta Airlines

Complimentary Toiletry Satchel.

Status:

The unit is undergoing design reconsideration. Drawings may be ordered of the Aleatory Department for a new prototype, as long as there is no demand. It seems to the Speculation Department that this could be a commercially viable product, given the lack of heavy, expensive, small, metal, extremely rugged, absolutely specialized, and technically limiting watercolor boxes available on today's aerospace art materials market. BPL could be the first to manufacture such a superfluous item, and offer it to wide distribution and long term storage.