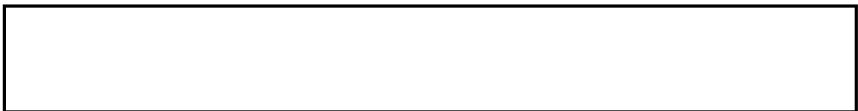


December 7, 1963

Linear Phasolver Measuring Engine



The heart of the Phasolver is the driver pattern to be laid down on a glass substrate and the coupler pattern to be laid down on a parallel glass plate.

STAT

[] designed a new pattern to minimize errors and insure achieving the 1 micron accuracy. It is a sinusoidal pattern similar to the one used in their rotary phasolver.

They are having trouble getting definitive bids for making the patterns.

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[] will make the glass blocks for substrate [] bid to make the coupler only which is straight ruling. [] bid the Driver pattern only, [] on glass. [] has promised to bid the driver manufacture from [] pattern

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[] gave them a telephone quote on both the driver and the coupler, but they cannot get a written quote from him.

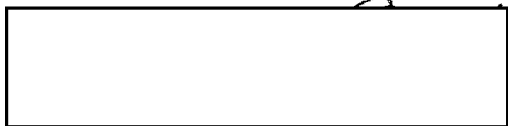
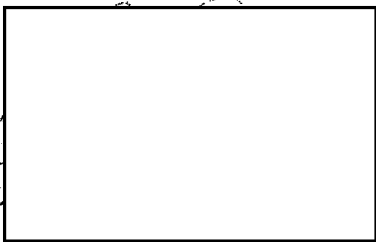
STATINTL

The trouble with getting the pattern work placed is putting them behind schedule. If they get the orders placed by 1 Jan., it could be as late as 1 July before they receive the finished driver.

This is the pacing item and everything else is well in hand. They are putting a lot of pressure on getting the Driver work under way.

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DECLASS REVIEW by NIMA/DOD

December 7, 1967

File

Variable Width Film Reader. [redacted]

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[redacted]

STATINTL

Work was started last July and delivery is due 30 March. They are presently a few weeks behind schedule, but [redacted] hopes to have the machine ~~ready for~~ assembled and ready for test by the end of February. That would give them the month of March to check it out.

That estimate seems a little optimistic, I doubt if they can make up their time. I suspect a few weeks delay isn't critical, so I did not press the point.

STAT

[redacted] has done an excellent job of checking out the unknowns of this gear in the breadboard stage. I wish their sister subsidiary in West wood did as well.

The operating model of the liquid gate worked beautifully. To eliminate bubbles going across the gate, they are building a low ~~velum~~ pressure, high volume slow acting pneumatic operated pump. It will operate about 5 strokes per minute so there will be no vibrations generated by it.

STATINTL

They are greatly concerned about operator convenience in changing spools and are working hard on this aspect. It is difficult because the spools are enclosed in the liquid chamber and the rollers and gate are submerged. Permanent leader seems the best answer for threading.

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[redacted] is doing their optics. He is probably best known for his wide angle anamorphic [redacted] Motion Picture Lens. [redacted] recommended [redacted] for the projection optics and he is currently working on the condenser optics. This will probably be one lens with auxiliary elements for the different powers. [redacted] is not presently satisfied with the uniformity of illumination he is getting on the screen. The optics work is behind schedule and is holding up some of their other design work.

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They will use a 5 KW [redacted] arc lamp as a light source. The lamp is in hand and they are about to start testing it. The digital counter for the [redacted] reading head will be delivered to [redacted] by [redacted] by the end of next week.

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[redacted] project engineer seems to have most of the problems well in hand. [redacted] says they have good control of their costs and expect to come in on budget.

[redacted]