FLOATING ELEMENT DESIGNS:

WE ARE LEANING TOWARDS USING A FLOATING ELEMENT WITH STRAIN GAGES MOUNTED FOR SHEAR STRESSES.

RALPH AND I TALKED ABOUT USING A CANTILEVER PLATE SET-UP. THIS WOULD ALLOW US TO MOUNT THE STRAIN GAGES TO GET THE LOADS. MY MODEL WOULD ALLOW FOR THIS AND AS SEEN ON PREVIOUS PAGE, THE S ARE QUITE SMALL. I THINK THIS IS THE BEST METHOD TO DO THIS, ALTHOUGH I AM A BIT INEXPERIENCED IN THIS.

NOTE: I THINK USING A COMPLETE INSERT IS THE BEST ROUTE FOR IMPLEMENTATION ON PLATE. THIS WOULD ENSURE THAT WE HAVE IT FLUSH WITH PLATE SURFACE. WE COULD THEN USE ALIGNMENT SCREWS OR SHIMS FOR FINAL ALIGNMENT.

\[ \text{Easier to cut out and put add element?} \]

\[ \text{Cut holes D or O and add insert} \]

\[ \text{Issues:} \]
\[ \text{- Gap Width} \]
\[ \text{- Attachment Points} \]
\[ \text{(Cross P. May Have Nice Insights)} \]
\[ \text{- Alignment w/ Plate} \]
\[ \text{- Round or Square? (Machining Purposes)} \]
\[ \text{- Needs to be easy enough to machine} \]
\[ \text{- Maybe slot holes for adjustability} \]

\[ \text{Introduce friction?} \]

\[ \text{This is a bit different.}" \]
CONCEPT IDEAS:

DIRECT MOUNTING OF ELEMENT ON PLATE w/ 2 PLETSOUES AND STRAIN GAUGES MOUNTED ON THEM. MUST PROVIDE A LEVELING MECHANISM!

OR USE A COMPLETE INSERT INTO PLATE

WE COULD ENSURE DURABILITY IS EASILY ADAPTED WITH INCREASED STRENGTH.

PLATE MAY AG TO THEN TO STEAM LIKE THIS

STILL WAITING FOR PAPERS REQUESTED FROM ILL. HOPEFULLY THEY WILL OFFER SOME HELPFUL INSIGHTS ON DESIGN AND USE HUES. I ALSO REQUESTED 2 ADDITIONAL PAPERS YESTERDAY THAT I THINK WILL PROVE HELPFUL.

CONCEPT SCHEMATIC:

THIS SCHEMATIC IS FROM WINTER'S PAPER ILLUSTRATING ALIGNMENT ISSUES. (SEE FIGURE 6) IT APPEARS THAT USING 11 NO REASON WE COULDN'T USE A REGULAR STRAIN GAUGE ON THE DREAMS RATHER THAN THE SPRING.

Parallel-linkage balance

WINTER (1977)