

COMPARISON OF EXPERIMENTAL AND NUMERICAL  
VALUES OF CYCLIC STRESSES FOR THE AE PISTON SKIRT

$g_0 = 0.0075$  inch  
load split = 88%

	Numerical	Experimental	
		largest observed value	smallest observed value
$\sigma_{III}$	-68.1	-44	-54
$\sigma_{min} (= 0.88 \sigma_{III})$	-60.0	-38.7	-47.5
$\sigma_{max} = \left[ - \frac{\text{inertia load}}{\text{pressure load minus inertia load}} \right] \times \sigma_{III}$	1.77	1.1	1.4
$\sigma_a \left[ = \frac{1}{2} (\sigma_{max} - \sigma_{min}) \right]$	30.9	19.9	24.5
$\sigma_m \left[ = \frac{1}{2} (\sigma_{max} + \sigma_{min}) \right]$	-29.1	-18.8	-23.0

\*Only  $\sigma_{III}$  was observed. All other values were calculated.

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