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TECHNICAL

THE INSTITUTE OF PAPER CHEMISTRY
Central Files Science and Technology Appleton, Wisconsin

EVALUATION OF JUMBO MULLEN DIAPHRAGMS
RECEIVED APRIL 29, 1968

✓ Project 2694-4

Report Two

A Progress Report to

Technical Division

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

June 18, 1968

SUMMARY

B. F. Perkins, Division of Standard International Corporation, recently submitted twenty-five diaphragms from a trial production run at the Chicago Rawhide Manufacturing Company to The Institute of Paper Chemistry for evaluation. The results indicated that:

1. All diaphragms exhibited pressures at 0.375 inch distention which were above the upper Rule 41 limit (30 p.s.i.). The average pressure was 34.8 p.s.i. and the maximum and minimum values were 37.5 and 32.7 p.s.i., respectively.

2. It was observed that (a) the diaphragms differed in surface finish from those received in recent past, (b) grating marks were visible on the under surface of the diaphragms, and (c) the diaphragm pressures did not increase smoothly when the diaphragms were distended.

The above results were relayed to B. F. Perkins and it is the Institute's understanding that shipments from this lot will be refused.

PROCEDURE

The diaphragms were manufactured by the Chicago Rawhide Manufacturing Company. One diaphragm was supplied from each mold cavity. Each diaphragm was evaluated using the following procedure:

1. Attach a 120 p.s.i. gage with rubber coupling to the hydraulic clamp tester.
 2. Insert the diaphragm in the tester using a clamping force of 1000 lb. when tightening the clamping ring.
 3. Adjust the diaphragm so that its top surface is level with the top of the bottom platen.
 4. Distend the diaphragm to 0.71 inch, ten times.
 5. Check the level of the diaphragm and adjust, if necessary.
 6. Distend the diaphragm five times to 0.375 inch distention.
- Record the reading and average.