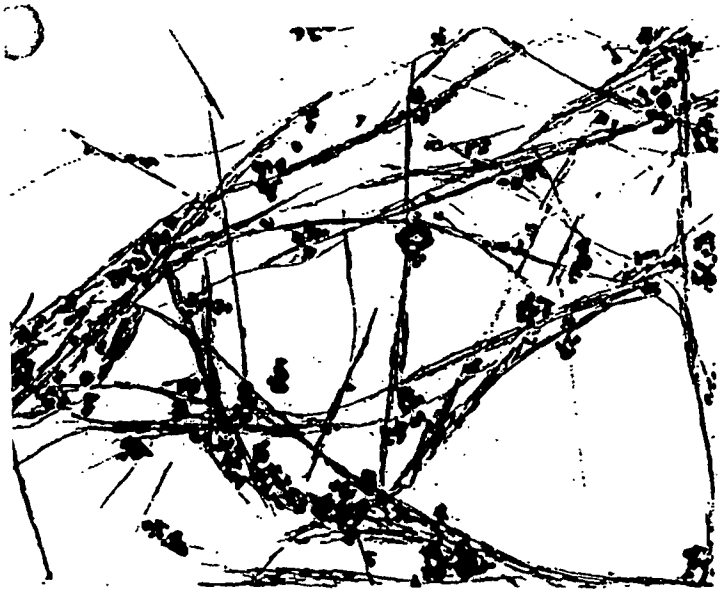
The improved retention provided by the asbestos reduced the loading of inorganic solids in the head box and buildup in the tray water. At the same time, the presence of asbestos "T" in the saveall improved recovery there. At the head box, the total filler content was reduced from 41% to 30%. As for the solids content in the tray water and saveall:

Total solids, lbs./1000 gallons	No asbestos	With asbestos
Tray water	26.54	17.14
Saveall influent	18.08	13.60
Saveall effluent	0.34	0.11

Thus the solids in the tray water were reduced by 34%, while the saveall influent and effluent were reduced by 25% and 68%, respectively. Overall recoveries in this flotation saveall increased from 98.1% to 99.2% in the presence of asbestos.

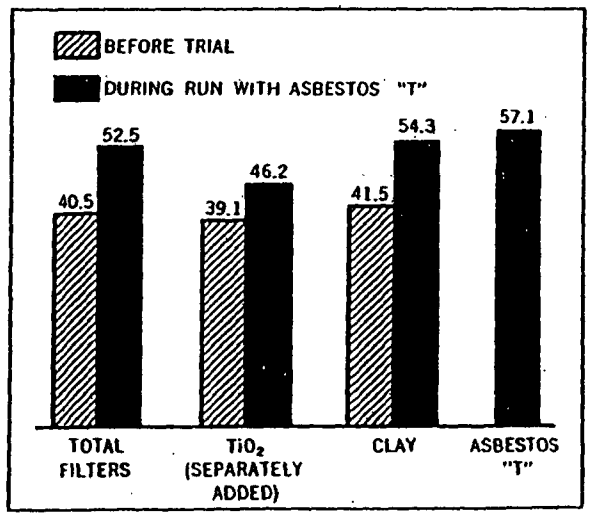


This mill, says Carbide, was most concerned with the maintenance of its opacity and brightness specifications. However, all quality specifications were met — opacity was kept at 91.0% vs. a prior 90.7% and brightness averaged 85.3% compared to 85.5% before. Moreover, claims Carbide, high values were maintained despite a drop in the TiO_2 content of the sheet from 8.66% to 7.34 % when asbestos "T" was substituted for part of the titanium dioxide in the furnish. Supplier and customer conclusion: data confirm the ability of asbestos "T" to optimize the light-scattering efficiency of TiO_2, yielding improved opacity and brightness at lower filler levels.

IT'S A GIFT

Asbestos "T" has yielded similar results in other production runs. For example, a mill producing 25-lb. white gift wrap used 30 lbs. of asbestos "T" to replace the same amount (or 50%) of the TiO_2 going into the furnish. According to mill information *(see figure 3)*, the new asbestos formulation improved across-the-wire retention of ash by 28% and separately-added TiO_2 by 6%. Retention improvements for the entire system were 50% and 15%, respectively. Retention of the asbestos "T" (both the asbestos and the TiO_2 in the product) was much higher than the other components — 41% across the wire and 76% overall, mill personnel reported.

SINGLE-PASS RETENTION, PER CENT
50-LB. OFFSET



Electron micrograph (left) shows the dispersed particles of titanium dioxide clinging to the asbestos fibers. Asbestos "T" itself (figure 2, above) improved the single-pass retention of fillers and titanium dioxide.