Model 601.07000

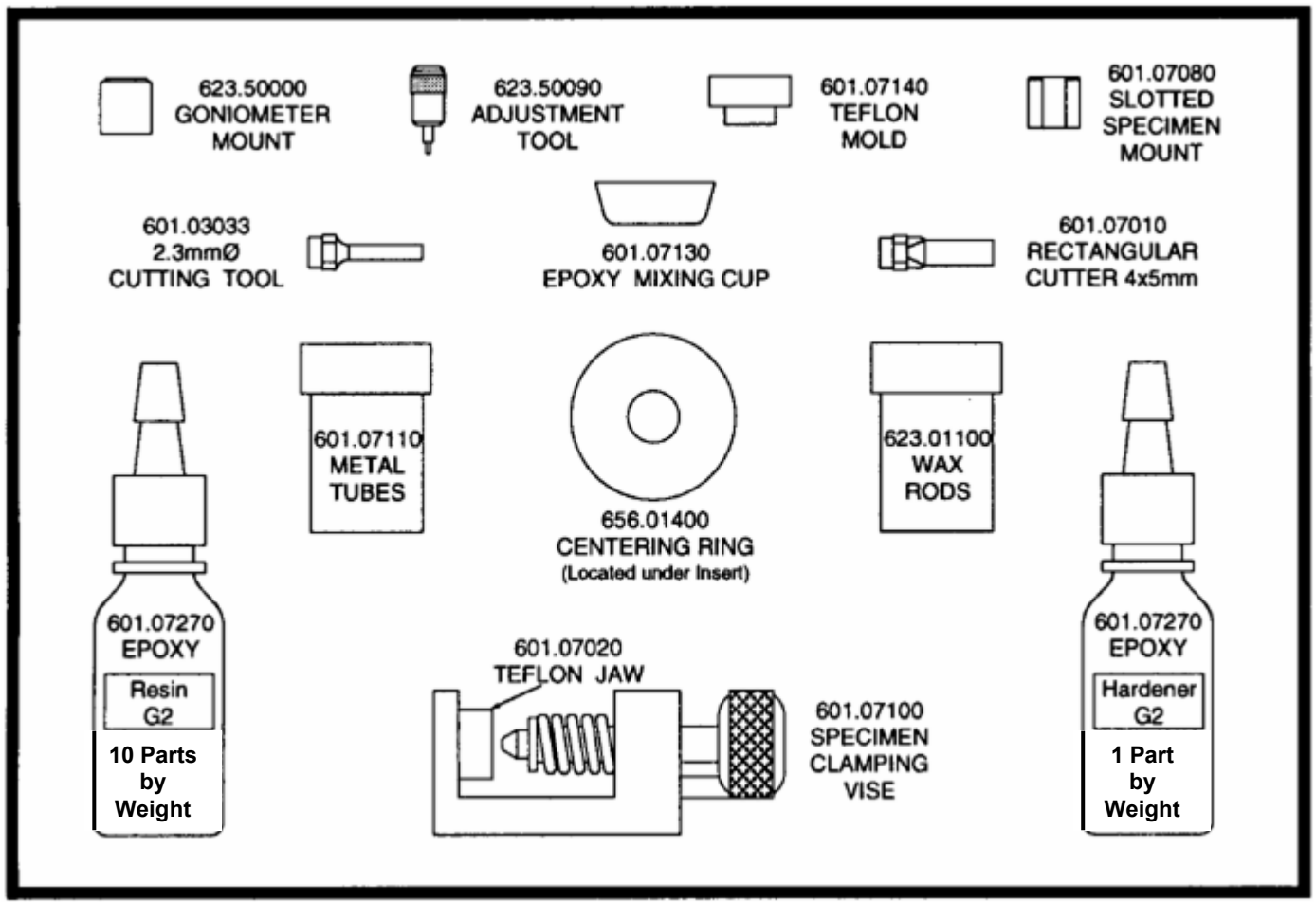
Cross Section Kit

gatan

Cross Section Kit

SPECIMEN PREPARATION

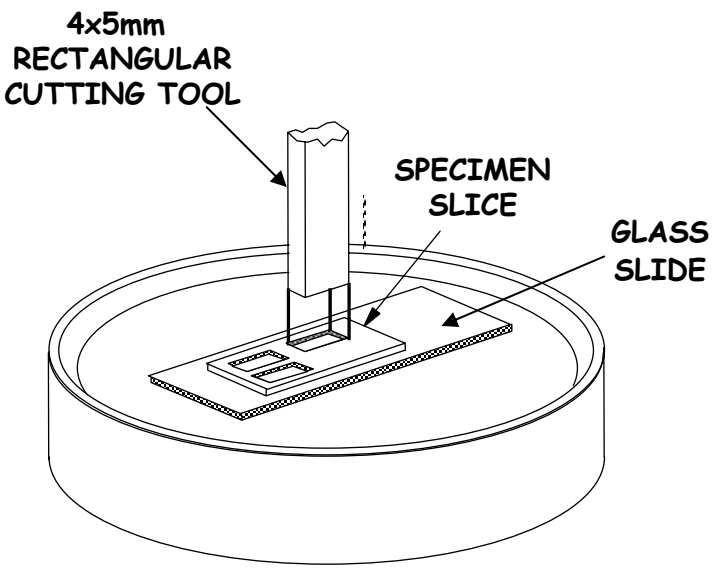
Kit simplifies preparation of TEM cross-sections



Preparing Cross-Sectional Specimens

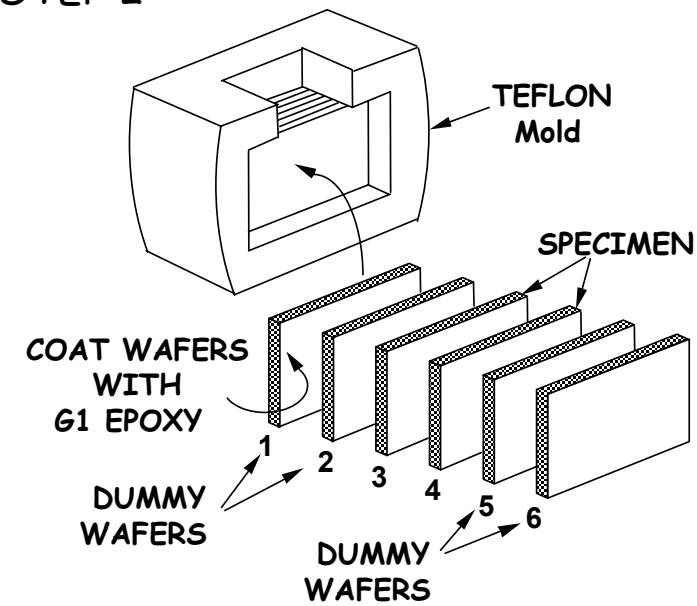
SPECIMEN PREPARATION

STEP 1



Cut rectangular wafers from bulk material using ultrasonic disc cutter

STEP 2

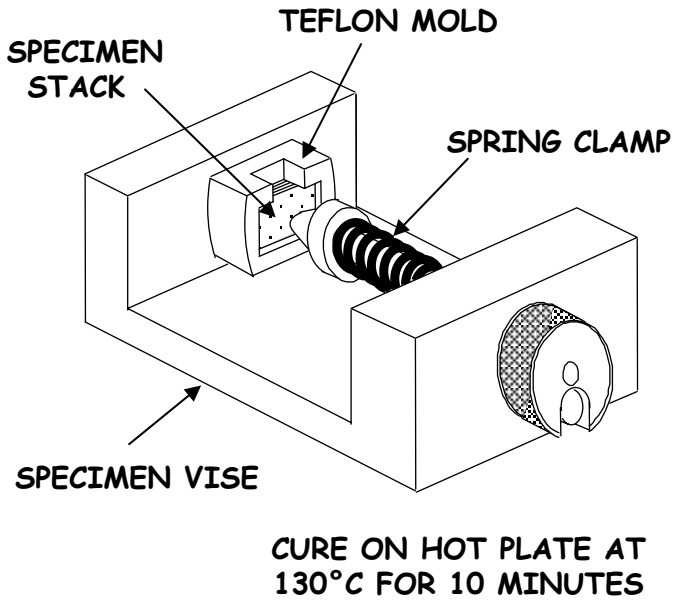


Coat all wafers with a thin layer of G-1 & load into Teflon™ mold

Preparing Cross-Sectional Specimens

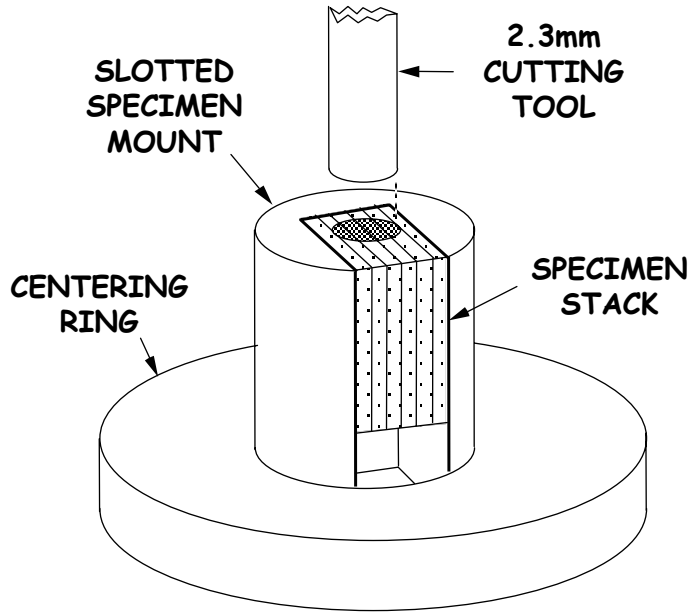
SPECIMEN PREPARATION

STEP 3



Cure glued stack under pressure to form a strong bond between wafers.

STEP 4

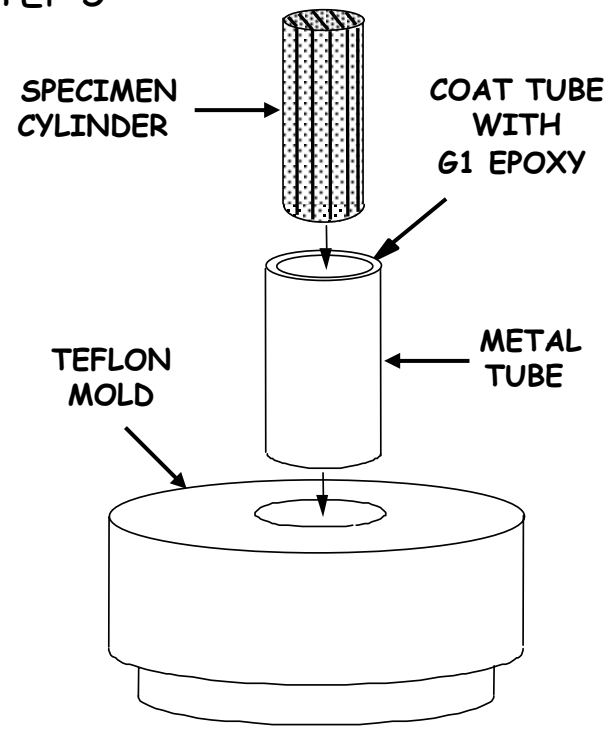


Cut cylinder from stack using ultrasonic disc cutter

Preparing Cross-Sectional TEM Discs

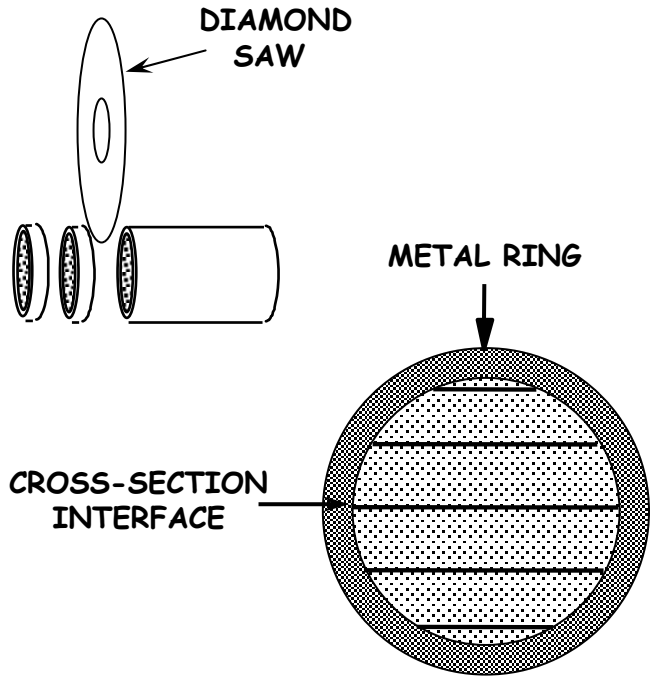
SPECIMEN PREPARATION

STEP 5



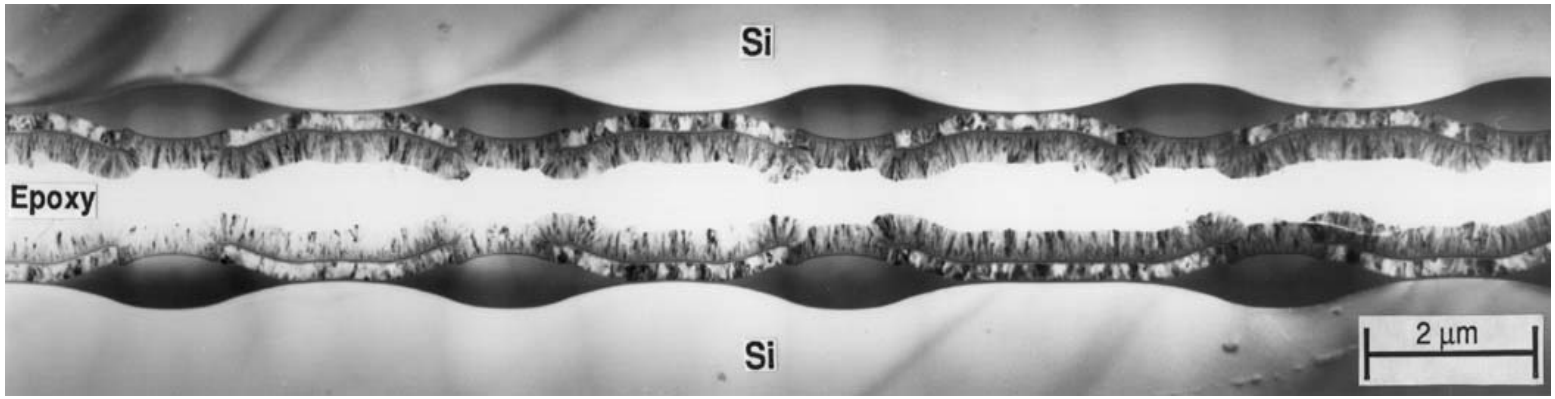
Glue cylinder inside metal tube. Cure on hot plate.

STEP 6



Sliced specimen discs ready for disc grinding and dimpling.

PIPS Cross-Section Application



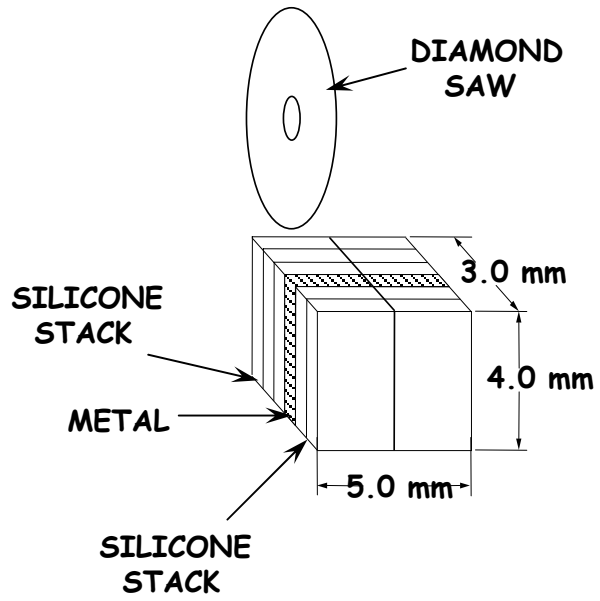
Cross-Section of a semi-processed IC device.

Note, well aligned features for both wafers.

Metals/Hard Materials Cross-Sections

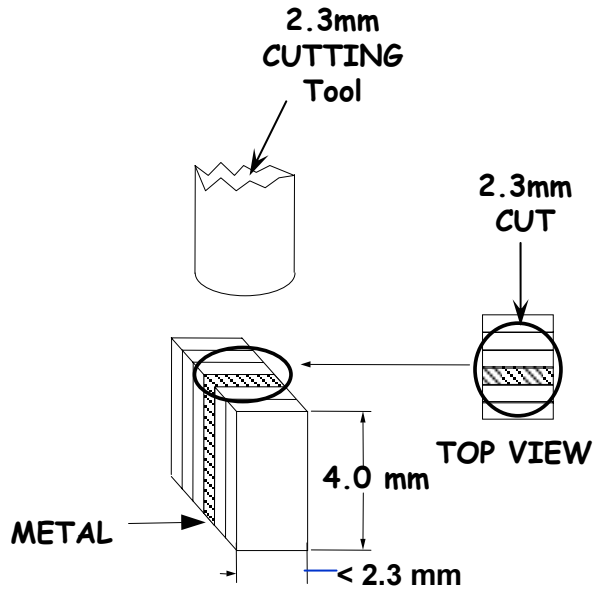
SPECIMEN PREPARATION

STEP 1



Cut stack using diamond saw to form 2 stacks 2.3mm wide

STEP 2



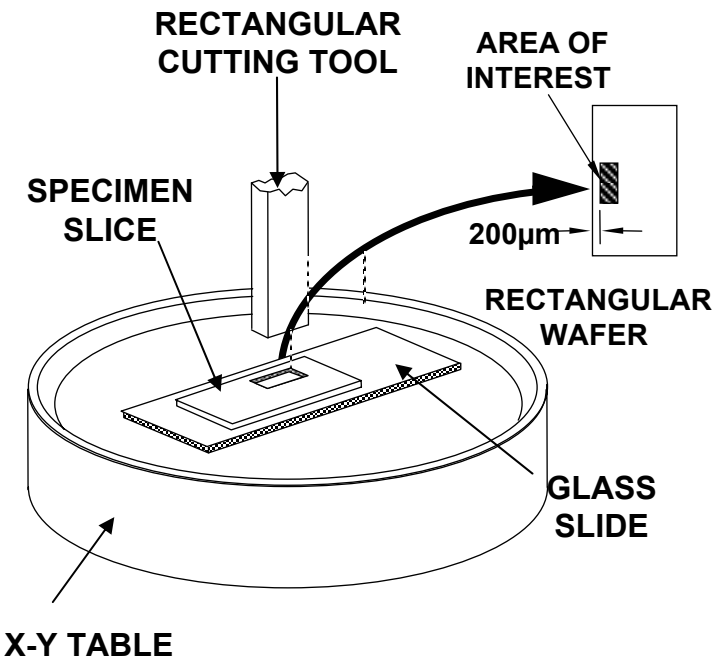
Cut cylinder from stack using ultrasonic disc cutter

Repeat Steps 5 & 6 from previous slide

Precision Cross-Sections

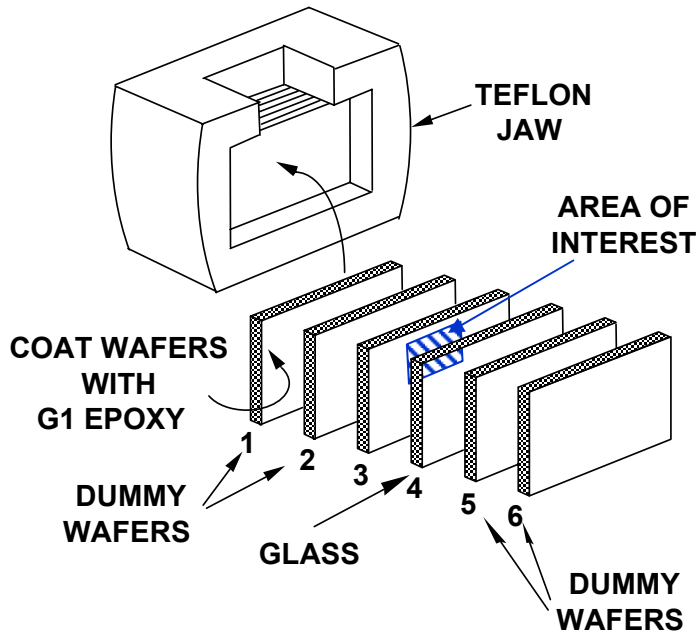
SPECIMEN PREPARATION

STEP 1



Cut rectangular section parallel to slice and < 200um from edge.

STEP 2



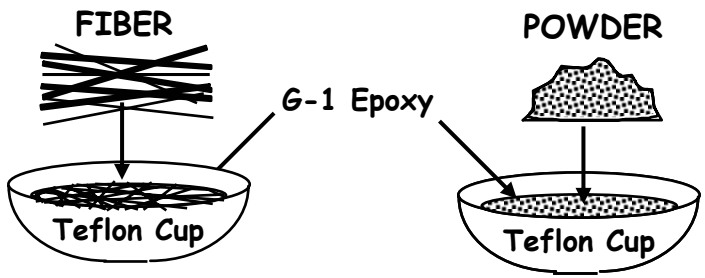
Coat all wafers with a thin layer of G-1 & load into Teflon™ mold

Repeat Steps 3-4-5-6 from previous slide

Preparing Powders and Fibers

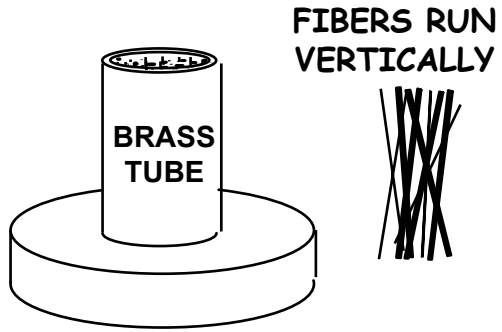
SPECIMEN PREPARATION

Step 1



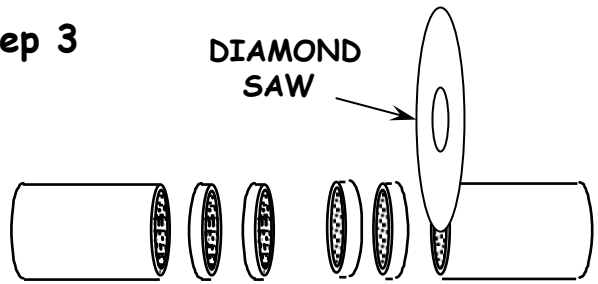
Mix G-1 epoxy with fibers or powder transfer mixture to a brass tube

Step 2



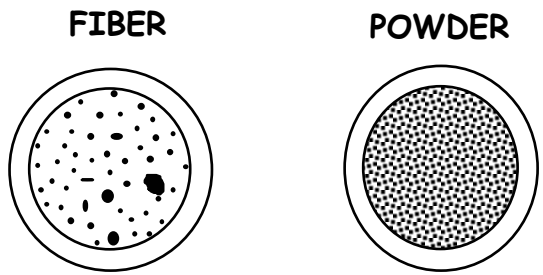
Cure epoxy on hot plate for 10 minutes at 130°C

Step 3



Cut brass tube into disc's for grinding to required thickness

Step 4

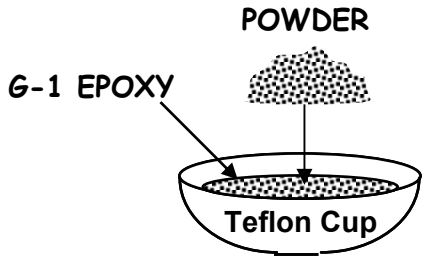


Disc grind, dimple grind and ion mill to perforation

Preparing Powders (Method 2)

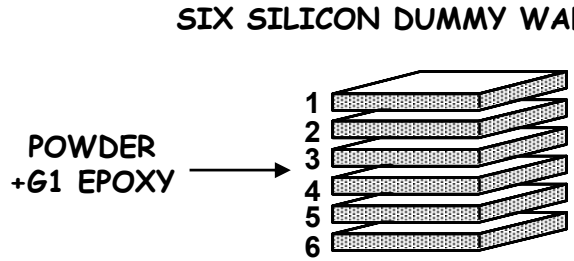
SPECIMEN PREPARATION

Step 1



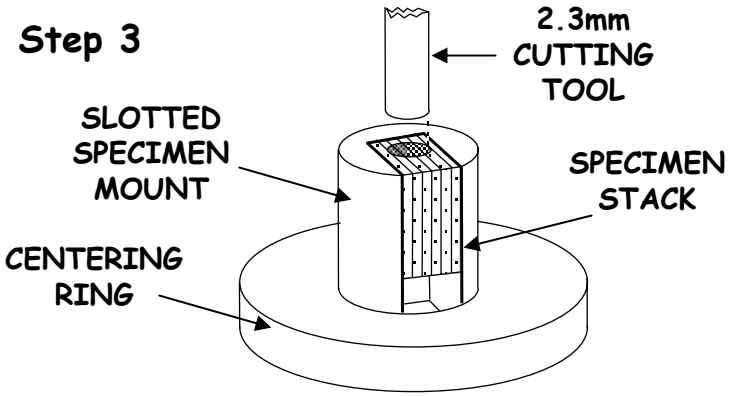
Mix G1 epoxy with powders
Transfer mixture to gap between wafers 3 and 4

Step 2



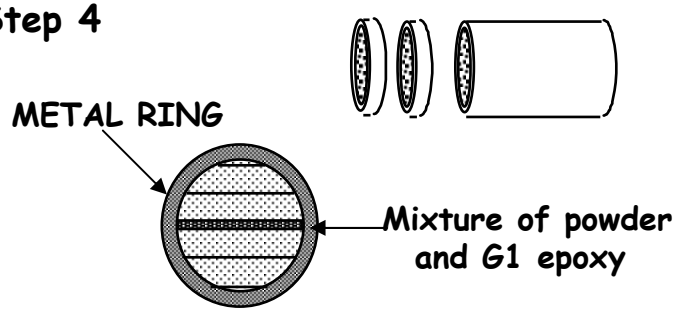
Coat wafers with epoxy and cure glued stack under pressure

Step 3



Cut cylinder from stack and glue inside metal tube. Cure on hot plate

Step 4



Cut reinforced specimen discs for disc grinding and dimpling