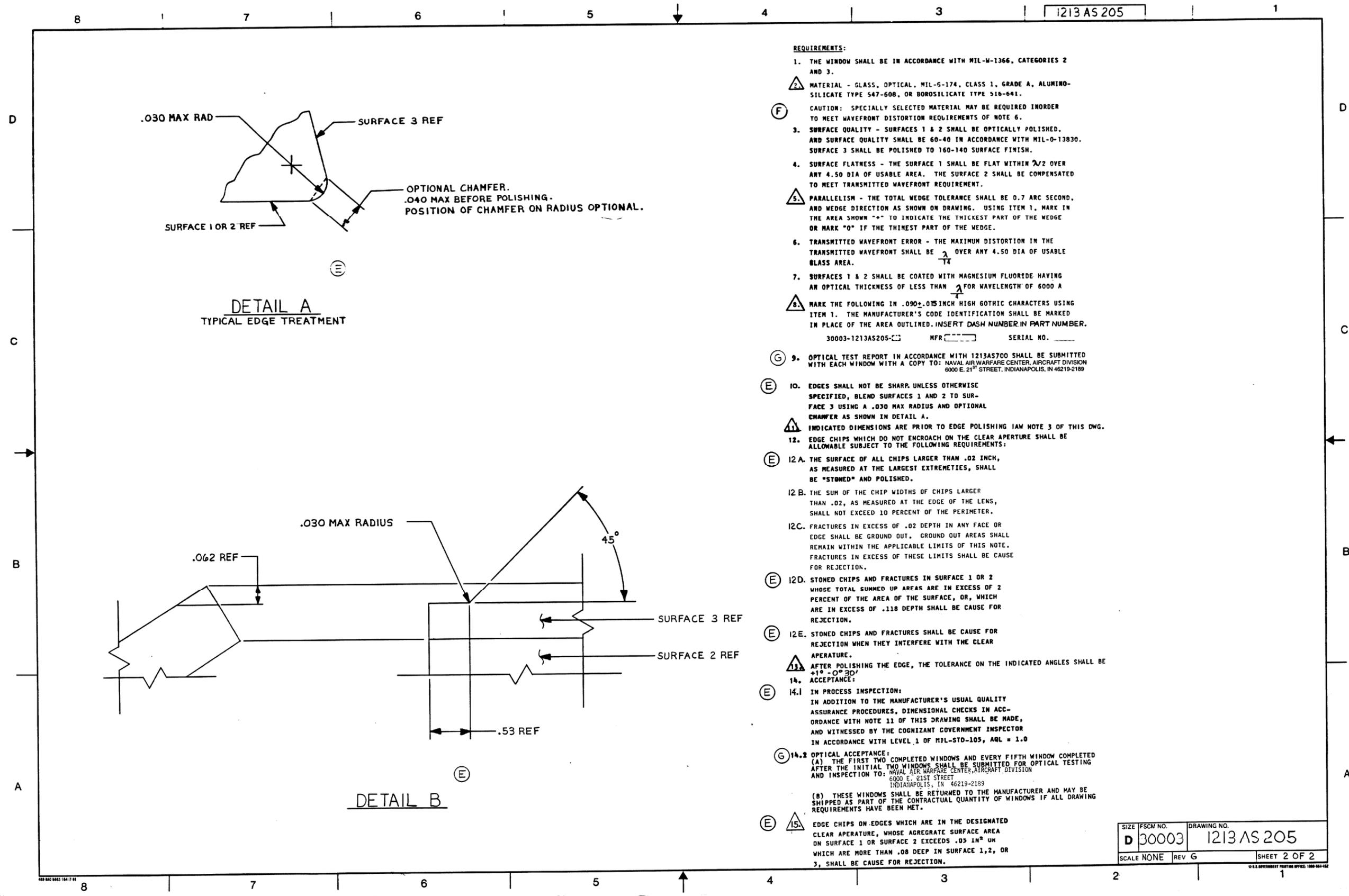


1213 AS 205



DETAIL A  
TYPICAL EDGE TREATMENT

DETAIL B

REQUIREMENTS:

1. THE WINDOW SHALL BE IN ACCORDANCE WITH MIL-W-1366, CATEGORIES 2 AND 3.
2. MATERIAL - GLASS, OPTICAL, MIL-5-174, CLASS 1, GRADE A, ALUMINO-SILICATE TYPE 547-608, OR BOROSILICATE TYPE 510-641.
3. SURFACE QUALITY - SURFACES 1 & 2 SHALL BE OPTICALLY POLISHED, AND SURFACE QUALITY SHALL BE 60-40 IN ACCORDANCE WITH MIL-O-13830. SURFACE 3 SHALL BE POLISHED TO 160-140 SURFACE FINISH.
4. SURFACE FLATNESS - THE SURFACE 1 SHALL BE FLAT WITHIN  $\lambda/2$  OVER ANY 4.50 DIA OF USABLE AREA. THE SURFACE 2 SHALL BE COMPENSATED TO MEET TRANSMITTED WAVEFRONT REQUIREMENT.
5. PARALLELISM - THE TOTAL WEDGE TOLERANCE SHALL BE 0.7 ARC SECOND, AND WEDGE DIRECTION AS SHOWN ON DRAWING. USING ITEM 1, MARK IN THE AREA SHOWN "+" TO INDICATE THE THICKEST PART OF THE WEDGE OR MARK "0" IF THE THINEST PART OF THE WEDGE.
6. TRANSMITTED WAVEFRONT ERROR - THE MAXIMUM DISTORTION IN THE TRANSMITTED WAVEFRONT SHALL BE  $\lambda/4$  OVER ANY 4.50 DIA OF USABLE GLASS AREA.
7. SURFACES 1 & 2 SHALL BE COATED WITH MAGNESIUM FLUORIDE HAVING AN OPTICAL THICKNESS OF LESS THAN  $\lambda/4$  FOR WAVELENGTH OF 6000 Å.
8. MARK THE FOLLOWING IN .090±.015 INCH HIGH GOTHIC CHARACTERS USING ITEM 1. THE MANUFACTURER'S CODE IDENTIFICATION SHALL BE MARKED IN PLACE OF THE AREA OUTLINED. INSERT DASH NUMBER IN PART NUMBER.  
30003-1213AS205-     MFR      SERIAL NO.
9. OPTICAL TEST REPORT IN ACCORDANCE WITH 1213AS700 SHALL BE SUBMITTED WITH EACH WINDOW WITH A COPY TO: NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION  
6000 E. 21<sup>ST</sup> STREET, INDIANAPOLIS, IN 46219-2189
10. EDGES SHALL NOT BE SHARP, UNLESS OTHERWISE SPECIFIED, BLEND SURFACES 1 AND 2 TO SURFACE 3 USING A .030 MAX RADIUS AND OPTIONAL CHAMFER AS SHOWN IN DETAIL A.
11. INDICATED DIMENSIONS ARE PRIOR TO EDGE POLISHING (AN NOTE 3 OF THIS DWG).
12. EDGE CHIPS WHICH DO NOT ENCR OACH ON THE CLEAR APERTURE SHALL BE ALLOWABLE SUBJECT TO THE FOLLOWING REQUIREMENTS:
  - 12.A. THE SURFACE OF ALL CHIPS LARGER THAN .02 INCH, AS MEASURED AT THE LARGEST EXTREMITIES, SHALL BE "STONED" AND POLISHED.
  - 12.B. THE SUM OF THE CHIP WIDTHS OF CHIPS LARGER THAN .02, AS MEASURED AT THE EDGE OF THE LENS, SHALL NOT EXCEED 10 PERCENT OF THE PERIMETER.
  - 12.C. FRACTURES IN EXCESS OF .02 DEPTH IN ANY FACE OR EDGE SHALL BE GROUND OUT. GROUND OUT AREAS SHALL REMAIN WITHIN THE APPLICABLE LIMITS OF THIS NOTE. FRACTURES IN EXCESS OF THESE LIMITS SHALL BE CAUSE FOR REJECTION.
  - 12.D. STONED CHIPS AND FRACTURES IN SURFACE 1 OR 2 WHOSE TOTAL SUMMED UP AREAS ARE IN EXCESS OF 2 PERCENT OF THE AREA OF THE SURFACE, OR, WHICH ARE IN EXCESS OF .118 DEPTH SHALL BE CAUSE FOR REJECTION.
  - 12.E. STONED CHIPS AND FRACTURES SHALL BE CAUSE FOR REJECTION WHEN THEY INTERFERE WITH THE CLEAR APERTURE.
13. AFTER POLISHING THE EDGE, THE TOLERANCE ON THE INDICATED ANGLES SHALL BE  $+1^{\circ} - 0^{\circ} 30'$
14. ACCEPTANCE:
  - 14.1 IN PROCESS INSPECTION:  
IN ADDITION TO THE MANUFACTURER'S USUAL QUALITY ASSURANCE PROCEDURES, DIMENSIONAL CHECKS IN ACCORDANCE WITH NOTE 11 OF THIS DRAWING SHALL BE MADE, AND WITNESSED BY THE COGNIZANT GOVERNMENT INSPECTOR IN ACCORDANCE WITH LEVEL 1 OF MIL-STD-105, AQL = 1.0
  - 14.2 OPTICAL ACCEPTANCE:  
(A) THE FIRST TWO COMPLETED WINDOWS AND EVERY FIFTH WINDOW COMPLETED AFTER THE INITIAL TWO WINDOWS SHALL BE SUBMITTED FOR OPTICAL TESTING AND INSPECTION TO: NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION  
6000 E. 21<sup>ST</sup> STREET, INDIANAPOLIS, IN 46219-2189  
(B) THESE WINDOWS SHALL BE RETURNED TO THE MANUFACTURER AND MAY BE SHIPPED AS PART OF THE CONTRACTUAL QUANTITY OF WINDOWS IF ALL DRAWING REQUIREMENTS HAVE BEEN MET.
15. EDGE CHIPS ON EDGES WHICH ARE IN THE DESIGNATED CLEAR APERTURE, WHOSE AGREGATE SURFACE AREA ON SURFACE 1 OR SURFACE 2 EXCEEDS .05 IN<sup>2</sup> OR WHICH ARE MORE THAN .08 DEEP IN SURFACE 1, 2, OR 3, SHALL BE CAUSE FOR REJECTION.

|       |          |              |
|-------|----------|--------------|
| SIZE  | FSCM NO. | DRAWING NO.  |
| D     | 30003    | 1213 AS 205  |
| SCALE | NONE     | REV G        |
|       |          | SHEET 2 OF 2 |