



NOTES:

1. HIGH QUALITY FULLY ANNEALED SEAMLESS TYPE 316, AUSTENITIC STAINLESS STEEL HYDRAULIC TUBING ASTM A212, A269 OR EQUIVALENT HARDNESS Rb 80 OR LESS. TUBING TO BE FREE OF SCRATCHES, O.D. TOLERANCE NOT TO EXCEED -0.03
2. USE PROPER TUBE BENDER TO BEND THE TUBE. KEEP THE TUBE ENDS STRAIGHT AND PROPER ROUNDNESS WITHOUT SCRATCHES.
3. BOTH I.D. AND O.D. OF TUBE SHOULD BE DEBURRED AFTER CUTTING
4. DIMENSIONS WITH [] ARE MILLIMETERS AND FOR REF. ONLY

| 1 | REDESIGNED | M.J.M. | D.S. | 10/00 |
|-----------|--------------------|--------|------|-------|
| SYM | CHANGE DESCRIPTION | BY | CHKD | DATE |
| REVISIONS | | | | |

| ITEM | DWG/PART NUMBER | NOMENCLATURE OR DESCRIPTION | MATERIAL / SPEC | QTY |
|--|-----------------|--|---|---|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES | | LOG NUMBER L5920005-01 | THIS DRAWING IS THE PROPERTY OF ARGONNE NATIONAL LABORATORY | |
| TOLERANCES DECIMALS .X - .1 [2.5] .XX - .01 [0.25] .XXX - .005 [0.13] SURFACE ROUGHNESS 125 ✓ REMOVE ALL BURRS AND BREAK SHARP EDGES .03 MAX. SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST ANSI B46.1 DIMENSIONING & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5 DO NOT SCALE DRAWING | | DRAWN BY MUSCIA CHECKED BY J. CHANG DESIGNER SHU/MUSCIA RESPONSIBLE ENGINEER D. SHU | DATE 7/14/97 DATE 7/25/97 DATE 7/14/97 DATE 7/25/97 | CHIEF DESIGN ENGINEER D. SHU GP LEADER T.M. KUZAY PROJECT MGR. APPROVED/RELEASED DATE 7/25/97 |
| | | | TITLE ADVANCED PHOTON SOURCE L5-92 APS UNDULATOR WHITE BEAM H & V GRAZING - INCIDENCE MOVEABLE MASK 4 TH COOLING TUBE | |
| MATERIAL 316 STAINLESS STEEL TUBING .375 O.D. X .035 THK. WALL | | | SCALE 1:1 | SHEET 14 |
| | | | SIZE B | DRAWING NUMBER L5-920005-01 |