

Requirements for sealed Microfocus X-Ray Source including vacuum, cooling system, high voltage generator, associated controller and software.

- 1) Excitation voltage to 225 kV minimum
  - a) Stability of 1% or better
  - b) Reproducible to 1% or better
- 2) Emission current stable and settable down to  $\leq 10$  microamps
- 3) Reflection target geometry is required
- 4) Field selectable/replaceable targets:
  - a) Supply Tungsten target
  - b) Quote molybdenum and copper target prices as well.
- 5) Microfocus spot size to 1 to 10 micron range
- 6) All controls, including electronics, vacuum, cooling, to properly operate x-ray tube including safety requirements
- 7) Standalone software package to provide user control of x-ray source
- 8) Total automated startup capability via control software and/or controller
- 9) Communication via Ethernet from PC to x-ray controller.
  - a) Government will supply PC running either Windows 2000 or Windows XP PRO
- 10) Control electronics and pumps to be mounted into a cabinet
- 11) Inter-connect cable – control electronics to x-ray tube – to be at least 5 meter
- 12) Environmental conditions: Standard laboratory environment 60 – 75 °F (~15 – 24 °C) RH  $\leq$  70%
- 13) Electrical Power: 208/230 vac, single phase, 60 cps, 10 amps max
- 14) Company will provide on-site installation with minor training within 1 week of receipt of system at MSFC
- 15) Maintenance kit for x-ray tube will be included
- 16) Instruction / User manual to be provided
- 17) All shipping charges to be included
- 18) Delivery time will be 10 weeks or less ARO
- 19) Standard company warranty will apply