Deviation Summary for LCLS Undulator Assemblies

The purpose of this form is to provide SLAC with a brief summary of deviations from drawings or specifications for each undulator assembly being delivered by ANL.

Undulator Assembly No. 1 Name of Assembly Organization: Hi-Tech Manufacturing Inc. ANL PO#: 5A-13624

No.	Deviation	Reported by	Reporting method	Disposition	Disposition by
1	Drill broke during process, remains stuck in hole. Hole is oversize as a result of removal attempts	Dial Machine, S. Lewis	Supplier Disposition Request #1	Plug and re drill.	G. Lawrence
2	Machine tool made false start, cutting support flat approx 1" wide, ¼" deep.		Supplier Disposition Request #2	Accept as is, will not have an effect on Strongback function.	G. Lawrence
3	The supplier has not provided certification that the forgings have been inspected or tested in accordance with ASTM B381 Grade F2 as required by section 4.1.1 of the SOW. The supplier has not provided certification that the forgings were annealed according to AMS-H-81200A or provided copies of the temperature profiles as required by section 4.1.2.2 of the SOW. The heat number on the mill certificate provided by the supplier is not clear because the language on the mill certificate is Russian.		ANL Report of Nonconformance #473	Accept as is. Supplier unable to provide certification or reconcile in accordance with the SOW. The SOW calls for a forging made fron, the Dial's material was forged from a bar material and should have no effect. Accept as is. Accept as is. T. Barsz reviewed the mill certificate with E. Trakhtenberg and found it to be acceptable.	G. Lawrence
4	The supplier is unable to provide copies of part temperature profiles required by section 4.2.1.3 of the SOW. The test report provided shows a temperature 1250 degress and a soak time of 4 hours. The supplier reported the 1.6 Surface Roughness ranged from 1.3 to 2.8. The supplier attributed the result to the type of milling cutter used to machine the 167.00 dimension. The supplier did not inspect the 15.0 diameter counterbored holes in accordance with ANSI Y15.4 section 3.4.3. The supplier used Datum B as the primary datum nstead of Datum A. The Go/NoGo thread gages used by the		ANL Report of Nonconformance #474	Accept for first article only since surface B perpendicularity was reported as .004mm. Supplier to modify its inspection procedure to make datum A the primary datum for the remaining Strongbacks. Accept as is for first article only. Supplier to have the thread gages calibrated for the remaining Strongbacks. Accept as is. Supplier to make a 2" wide hard gage to verify the 167.00 dimension on the remaining Strongbacks after verifying the accuracy of the hard gage with calibrated gage blocks. Accept as is. Supplier to improve its cleaning process and add a requirement	G. Lawrence

	supplier to accept the tapped holes were out of calibration. Some of the thread gages did not have any calibration labels. The gage blocks used to verifiy the 167.00 dimension were not calibrated since 6/8/04. The gage blocks could not wrung together indicating that the gage blocks are very worn. The threaded holes contained machining debris and did not to be adequately cleaned.			for checking cleanliness on its inspecton sheet.	