



Title: Furnace Thermocouples	MS-110A
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1.0 Purpose

1.1 This document establishes the requirements for furnace thermocouples (TC) to be used in Meyer Tool’s coating, heat treating, and brazing processes.

2.0 Certificate Required

2.1 Each lot must be accompanied with a Certificate of Compliance. The analysis must state that the material meets or exceeds the criteria listed in the Meyer Tool purchase order and/or that listed below.

3.0 Coating Furnace Thermocouples

- 3.1 Control, monitoring, and overtemp TC’s must be:
 - 3.1.1 Type K nonexpendable with correction factors meeting the requirements of Table 1.
 - 3.1.2 Correction factors must be the average of the ends.
 - 3.1.3 End to end difference in correction factors may not exceed 2° F.
 - 3.1.4 Limits apply from 750°F to 2250°F.

4.0 Vacuum Furnace Thermocouples

- 4.1 Workload TC’s must be:
 - 4.1.1 Type K nonexpendable with correction factors compliant with Table 1.
- 4.2 Control TC’s must be:
 - 4.2.1 Type R nonexpendable with a correction factor of +/- .75% of reading max.
- 4.3 For all TC’s:
 - 4.3.1 Correction factors must be the average of the ends.

Date		Date	
Engineering		Quality	

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- 4.3.2 End to end difference in correction factors may not exceed 2° F.
- 4.3.3 Limits apply from 750° F to 2250° F.

TABLE 1

Allowable correction factors for Type K
workload TC's

Temp	Allowable TC Error	Allowable TC%
700	0.8	0.11%
750	1.0	0.13%
800	1.2	0.15%
850	1.4	0.16%
900	1.6	0.18%
950	1.8	0.19%
1000	2.0	0.20%
1050	2.2	0.21%
1100	2.4	0.22%
1150	2.6	0.23%
1200	2.8	0.23%
1250	3.0	0.24%
1300	3.2	0.25%
1350	3.4	0.25%
1400	3.6	0.26%
1450	3.8	0.26%
1500	4.0	0.27%
1550	4.2	0.27%
1600	4.4	0.28%
1650	4.6	0.28%
1700	4.8	0.28%
1750	5.0	0.29%
1800	5.2	0.29%
1850	5.4	0.29%
1900	5.6	0.29%
1950	5.8	0.30%
2000	6.0	0.30%
2050	6.2	0.30%
2100	6.4	0.30%
2150	6.6	0.31%
2200	6.8	0.31%
2250	7.0	0.31%
2300	7.2	0.31%

