

Nadcap

International certification system for special processes in the aerospace industry

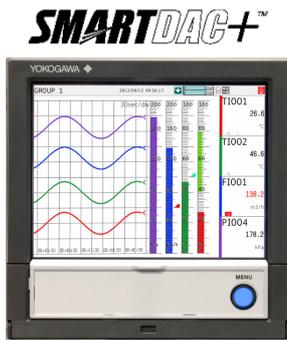
AMS2750F

SAE standard related to pyrometry for equipment used for thermal processing of aerospace parts

*Nadcap: National Aerospace and Defense Contractors Accreditation Program
*AMS: Aerospace Material Specifications

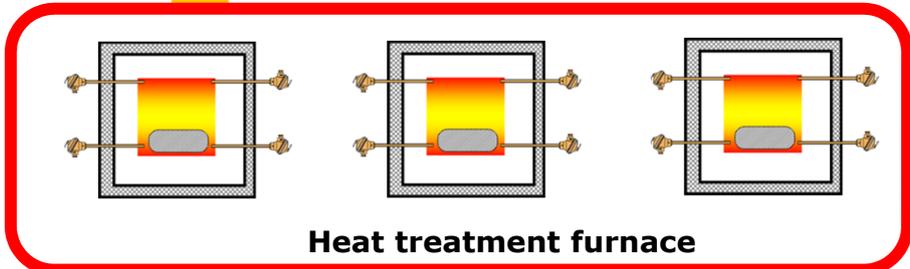
SMARTDAC+ compliance with AMS2750F

1. TC measurement accuracy within $\pm 1.0^{\circ}\text{F}$ or $\pm 0.6^{\circ}\text{C}$ (with calibration correction)
2. Instrument calibration reminder
3. Adds sensor correction factor values to recorded data
4. Secure, tamper-proof data with password access management
5. Meets field test instrument requirements for TUS work

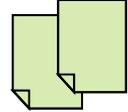


SMARTDAC+ Applications

- Electronic recording of QA data; replaces aging paper chart recorders
- Temperature Uniformity Surveys (TUS)

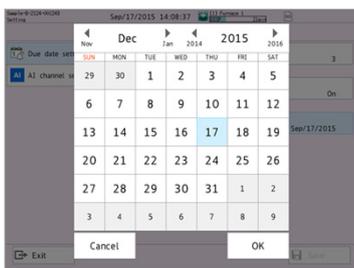


Heat treatment furnace

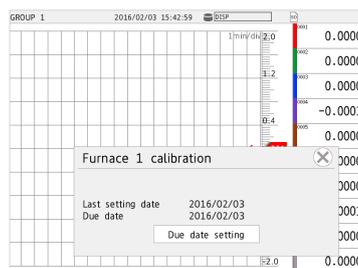


TUS reports

Instrument calibration reminder function



Set calibration date



Notification screen

Model	Number of Schedules
GX10, GP10	Up to 6
GX20-1, GP20-1, GM10-1	Up to 6
GX20-2, GP20-2, GM10-2	Up to 12

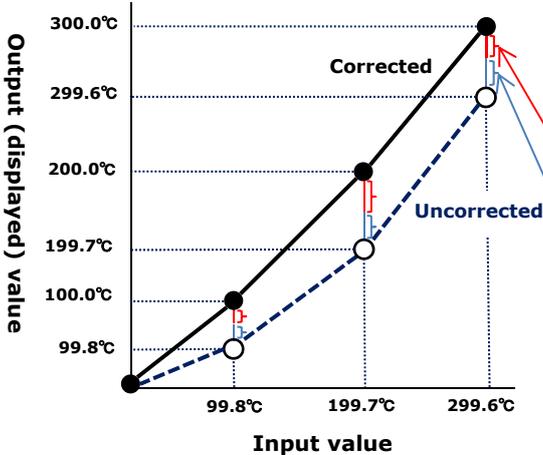
Reminder	
Furnace 1 Calibration Time until due date: 63 days	Furnace 4 Calibration Time until due date: 7 days
Furnace 2 Calibration Time until due date: 70 days	Furnace 5 Calibration Time until due date: 28 days
Furnace 3 Calibration Time until due date: 0 days	Furnace 6 Calibration Time until due date: 35 days

- After due date
- After reminder before due date
- Before reminder date

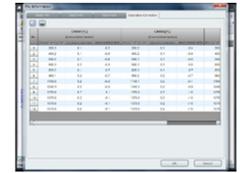
Reminder screen

Correction Coefficient Mode of Calibration Correction

Sensor and recording instrument correction factors can be set separately and accounted for in the recorded data, conforming to AMS2750F. SMARTDAC+ has up to 11 linearizer function segments for each input channel (Max. 12 set points) The calibration settings are saved and recorded together with the recorded data.



Correction point	1	2	3
Uncorrected input value	99.8 °C	199.7 °C	299.6 °C
Sensor correction factor	0.1 °C	0.2 °C	0.2 °C
Instrument correction factor	0.1 °C	0.1 °C	0.2 °C
Corrected measured value	100.0 °C	200.0 °C	300.0 °C



Corrected values can be confirmed by dedicated software

Security functions



Login for controlled access

- Administrator and User level log in
- Selectable User level access properties
- Advanced Security option /AS adds Electronic Signature and Audit Trail



Encrypted binary files to prevent data tampering

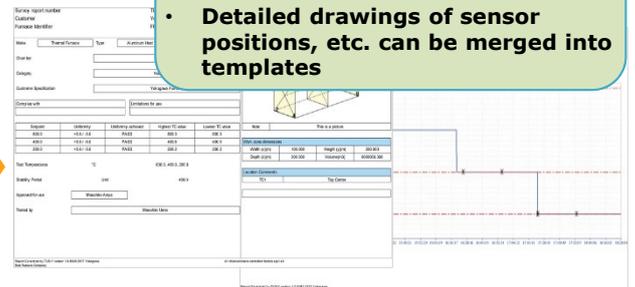
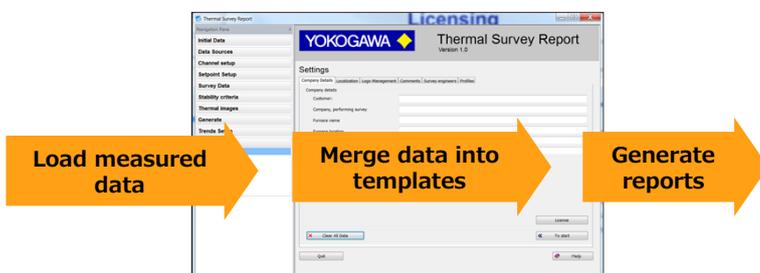
Time	Action	Factor	User
2012/01/01 10:22:54	MathStop	OPERATE	User001
2012/01/01 10:22:54	MemStop	OPERATE	User001
2012/01/01 10:21:29	MemStart	OPERATE	User001
2012/01/01 10:21:29	MathStart	OPERATE	User001
2012/01/01 10:21:20	ParameterSet	OPERATE	User001
2012/01/01 10:21:11	Error242	SYSTEM	
2012/01/01 10:21:11	Error503	SYSTEM	
2012/01/01 10:21:11	ParameterSet	OPERATE	User001
2012/01/01 09:45:48	ParameterSet	OPERATE	User001
2012/01/01 09:43:39	ParameterSet	OPERATE	User001
2012/01/01 09:42:31	ParameterSet	OPERATE	User001
2012/01/01 09:41:53	MathStop	OPERATE	User001
2012/01/01 09:41:53	MemStop	OPERATE	User001
2012/01/01 09:41:34	MemStart	OPERATE	User001
2012/01/01 09:41:34	MathStart	OPERATE	User001

E-signature and audit trail functions
*with /AS option

TUS reporting software (sold separately)

Easily create TUS reports from data measured by recorders

- Max/min temperature
- TUS pass/fail result
- Temperature change trend over time etc.
- Detailed drawings of sensor positions, etc. can be merged into templates



* For information on TUS software, contact your Yokogawa representative.

YOKOGAWA ELECTRIC CORPORATION
E-mail: ns@cs.jp.yokogawa.com

<http://www.yokogawa.com/>

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