

# SMMT IF ISO/TS16949: 2002 NEWSLETTER



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*Welcome to the eighth edition of the SMMT IF ISO/TS 16949: 2002 newsletter. This regular publication is aimed to keep readers up to date with developments with ISO/TS 16949 and SMMT IF services. Feel free to distribute to other interested parties.*

*Any comments and suggestions for future editions would be welcomed, addressed to [paul.hardiman@industryforum.co.uk](mailto:paul.hardiman@industryforum.co.uk)*

## SMMT Industry Forum Services

SMMT Industry forum is the approved SMMT IATF Oversight Training Provider; and supplies a wide range of training and consultancy to the automotive supply chain, in relation to ISO/TS 16949, the automotive core tools, problem solving, ISO 9001, and integrated quality and environmental management system auditing.

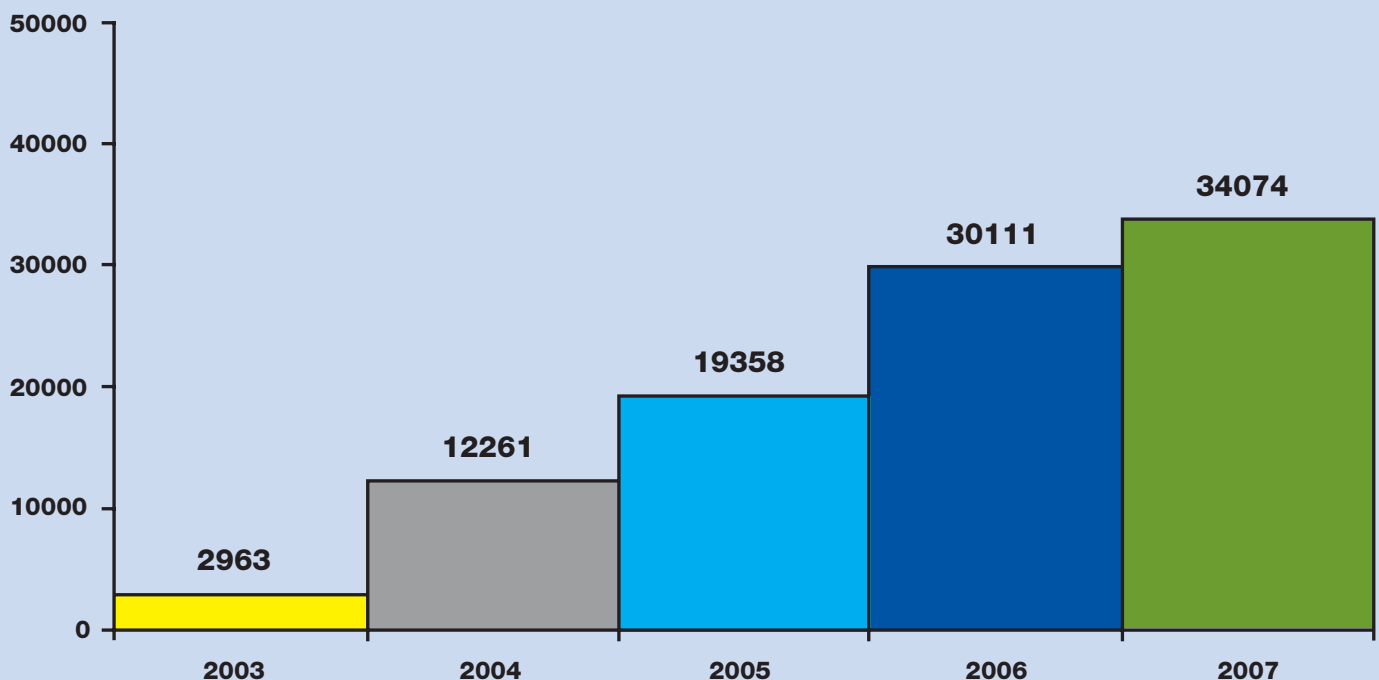
Training is held at open venues, and can also be delivered in-house, tailored to meet organisations specific needs.

Full details of all courses can be found at [www.industryforum.co.uk](http://www.industryforum.co.uk) or please contact Jenna Porch on 0121 717 6614.

All courses are delivered by trainers with direct experience of working in the automotive supply chain. The trainers are qualified to deliver practical “learn by doing” training utilising the automotive process approach. If you would like to see a copy of the trainer profiles e-mail [jenna.proch@industryforum.co.uk](mailto:jenna.proch@industryforum.co.uk).

## GROWTH IN ISO/TS16949: 2002 REGISTRATIONS

The number of registrations to ISO/TS16949: 2002 continues to grow. At the end of April 2007, a total of 34074 organisations had achieved approval.



# REVISION OF THE ISO9000 SERIES

The ISO technical committee TC176 and relevant sub-groups met in Helsinki from the 11-15th June to progress the amendments to ISO9001, and the revision of ISO 9004.

As discussed in earlier newsletters, the amendments ISO 9001 are minor, and as such it is expected the standard will now progress from committee draft to final draft, with an aim to publish the final standard in October 2008.

Because the amendments do not actually change any requirements, it is expected transition from ISO 9001:2000 to ISO 9001:2008 will not need any "transition assessment" activity, but this is still to be confirmed by the accreditation bodies.

The International Automotive Task Force (IATF) responsible for the ISO/TS 16949 technical specification are monitoring progress closely, and will soon need to make the decision on the timeline for the revision of ISO/TS 16949. One view is to revise the specification to align with the release of ISO 9001 in 2008 but this is still to be confirmed.

The changes proposed to ISO 9004 are far more radical, and as such the revision process is expected to take longer, with an anticipated release date of August 2009. We will continue to track progress in future newsletters.

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## CALIBRATION: INTERNAL OR EXTERNAL LABORATORY?

A massive amount of money is spent each year by organisations sending equipment to external laboratories for calibration. The automotive industry recognise that it is imperative to have effective measuring systems to verify the conformity of product to specification, and a key aspect of the acceptability of the measuring system is reliable and trustworthy calibration.

A concern of the International Automotive Task Force (IATF) is that historically many organisations were using the cheapest calibration provider available, sometimes using traceable standards many time removed from the ultimate master, and that an unacceptable amount of measurement system uncertainty was being introduced through the calibration "supply chain". To reduce the risk, IATF introduced the ISO/TS 16949 requirement linked to ISO/IEC 17025.

To meet 7.6.3.2 in ISO/TS 16949: 2002, external laboratories used by an organisation for calibration have to be accredited to ISO/IEC

17025, or there needs to be evidence that the external laboratory is acceptable to the customer (in reality it is not often possible to get evidence of customer approval). To get a certificate, showing evidence that calibration was carried out under the scope of accreditation, from an ISO/IEC 17025 laboratory is notoriously expensive (quotes of up to four times that for an unaccredited certificate).



The only alternative allowed in 7.6.3.2 is that if the organisation undertakes a search (e.g. by review of websites such as [www.ukas.com](http://www.ukas.com)) and cannot find an accredited laboratory; it can use the original equipment manufacturer.

In this case the organisation would need to demonstrate it has validated that the original equipment manufacturer has controls in place to provide a calibration service that meet the requirements defined in ISO/TS 16949: 2002, 7.6.3.1 Internal Laboratory. This may involve a supplier assessment visit, prior to undertaking the calibration, or asking the provider to provide evidence of:

- Competent personnel who will undertake the calibration
- Details of the standard(s) the calibration is to be undertaken against
- Details of how traceability to international or national standards is achieved

After the calibration is performed, the calibration provider would need to provide evidence that the calibration has been performed correctly, traceable back to an international or national standard.

The cost of having calibration undertaken by external laboratories is driving many organisations to investigate how calibration may be performed in a more cost effective manner, without compromising meeting the requirements of ISO/TS 16949: 2002

## How can this be done?

### Review of calibration frequency

Some people believe that ISO/TS 16949 defines the maximum calibration frequency, with some quoting a minimum of annual calibration. In review of ISO/TS 16949: 2002, paragraph 7.6, we see this is not the case, the requirement states “calibrated or verified at specified intervals.....”

The next thing we have to consider is if there are any customer specific requirements related to frequency of calibration. On reviewing all the major vehicle manufacturers’ customer specific requirements calibration frequency is not typically prescribed.

## What frequency?

To establish a frequency several things need to be taken into account:

- Equipment manufacturer’s recommendations?  
Any equipment manufacturer specifications on calibration frequency should be considered.
- What is the risk to the customer if the equipment is not within calibration?  
This is a key point to consider. The prime purpose of making measurements is to verify that product meets the customer specification. What would be the implications of the equipment being used to make the measurement “drifting” out of calibration between the calibration intervals specified?
- How often is the equipment used?
- The work environment the equipment is used in?
- Previous calibration records (where available)?  
Review of previous calibration records may give evidence of the stability of the measurement system, and whether historically any out of calibration reading have been observed in the “as received” condition

## Case study example

An organisation has a 0-25mm micrometer used to verify a critical characteristic on a product. Historically (for the previous three years) the gauge has been calibrated externally by an ISO/IEC 17025 accredited laboratory on a six monthly basis. (The six previous calibration certificates are available). All certificates show the calibrations to be within the defined specification (as received) with no adjustments necessary.

In addition a MSA gauge R and R study had been undertaken on this type of gauge, and showed an acceptable gauge R and R of 8.5%. There have been no changes in the measurement system since this initial MSA study (i.e. work environment, skill level of appraiser etc)

The organisation decide, based upon a review of records, to extend the calibration frequency to annual (with the justification for the decision being recorded in the calibration database)

However to minimise the risk to the customer the organisation decides to broaden the scope of the measurement system analysis to be applied to this gauge. Historically between the calibration intervals no MSA

studies had been undertaken, meaning in theory that the gauge could be used for up to six months out of calibration (through damage, wear etc). They decide to create two reference values that represent the normal working range of the gauge, one at 5mm and one at 15mm nominal. The dimensions of the reference values were established using a more accurate instrument in the organisations internal laboratory.

Work instructions were amended to state that once per week the operator was to check each reference value 5 times, and plot the value on an X bar R chart. When sufficient data was collected control limits were calculated. The work instruction states that the team leader should be informed if any out of control or trends were identified. This could result in the instrument being recalled for calibration.

As well as protecting the customer, this provides the organisation valuable evidence to meet the bias, linearity and stability requirements specified in the AIAG MSA reference manual, and also the use of appropriate statistical techniques.

## Change from external to internal calibration?

The answer is yes, but with a proviso that all requirements in ISO/TS 16949: 2002, paragraph 7.6.3.1, Internal Laboratory, are met. Clause 7.6.3.1 requires that procedures outlining the calibration method are defined, with reference being made to any appropriate International or National Standard as appropriate. Secondly the organisation needs to ensure qualified personnel undertake the calibration and are able to effectively interpret the results of the calibration, including measurement system uncertainty. Records of competence need to be maintained. Thirdly records of calibration must be maintained to demonstrate traceability to International or National Standards

## Summary

In conclusion organisations can significantly reduce the cost of calibration, but before making any changes, it would need to be demonstrated that a logical thought process has been followed, including consideration of risk to the customer and that changes were not purely cost driven.

# SMMT SUPPLIER CAMPUS

**On the 17th-18th October 2007, as part of the Manufacturing Live exhibition at the Rioch Arena in Coventry, SMMT will be hosting a Supplier Campus.**

**The Campus, focused on “Globally Competitive Manufacturing”, and will include seminars from Honda, Toyota, Nissan and GKN, all supported by SMMT Industry Forum. These seminars will be free (based on a first come first served basis).**

**The event will give attendees a chance to network, tour the exhibition and get update on current thinking related to automotive tools and techniques.**

**Further details will follow in the next edition of the SMMT newsletter, or please visit: [www.themanufacturer.com](http://www.themanufacturer.com)**



# THE ISO/TS 16949 RECERTIFICATION PROCESS

Many organisations registered to ISO/TS 16949 are now coming up for their recertification.

## What is recertification?

In the “Rules for achieving IATF recognition” the ISO/TS 16949 registration process is defined.

Following registration a certificate is issued for three years, the date of registration being the date the certification body veto person confirms the decision. The certificate issued by the Certification Body has a three year validity.

In years one and two, surveillance audits take place, and then in year three a recertification audit.

## What is the duration or the recertification audit?

The duration, based upon the number of employees in the organisation, as defined in Annex 3 of the Rules for achieving IATF recognition. Typically this is about 70% of the duration of the initial (stage 2) audit.

## What is the purpose of recertification?

Whereas the surveillance programme takes a snapshot of the effectiveness and efficiency of some of the organisations processes, the purpose of the recertification is to review the overall effectiveness of the overall management system to meet customer and organisation requirements.

The rules state: “Every recertification audit shall reassess the effective inter-action between the processes defined in the quality management system and the overall effectiveness of the management system in its entirety, taking into consideration internal and external changes which may have affected the quality management system”.

## When is the recertification audit scheduled?

The recertification audit should be scheduled by the Certification Body three years from the date of the end of the initial (stage 2 audit), plus 0, minus 3 months.

Timing is critical. Any non-conformances arising from the recertification audit have to be 100% resolved, and verified by the certification body, within 90 days from the end of the recertification audit. The certification body veto decision must be before the end of the current certificate expiry date, if not then the organisation may loose registration and have to return right back to the beginning of the registration process!

## Who will undertake the audit?

The rules state: “at least one member of the initial audit team should participate in all audits of the three year audit cycle. For each subsequent audit cycle, different auditors should be used”. From this you can see that IATF expectation is for auditor rotation to prevent familiarity and to introduce a “fresh pair of eyes” to review the ongoing effectiveness and efficiency of the management system.

## Conclusion

The recertification process is a reminder that registration to ISO/TS 16949 is not a “badge of life” and many organisations have encountered significant problems on the recertification audit, ultimately losing registration. Be warned!