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# The Equipment and Facilities Specifications Newsletter

An official copyrighted publication of the Equipment and Facilities Specifications Subcommittee  
of the National Officials Committee in its 19th year of publication

**T**his Newsletter is a semi-annually educational tool for Implement Inspectors, Technical Managers, interested Throws Officials, and certification chairs. Input and suggests are always welcome. This copy is being sent to about 830 officials around the world. If you know someone who could benefit by getting this information, please send his or her address or e-mail address to the editor. Likewise, if you are no longer interested in being on our mailing list, also let me know. We are cleaning up the list for the new Olympiad. For faster delivery, and for updates in between newsletters, send me your e-mail address. If you're getting this by mail, I don't have your currenrt e-mail address.

## **NEW CHAIR AND NEWSLETTER EDITOR FOR THE NEW OLYMPIAD**

**S**ince I have taken over the chairmanship of the Equipment & Facilities Subcommittee from George Kleeman, who was responsible for getting this committee going, I thought I should take this opportunity to introduce myself to those readers of the newsletter that don't know me.

First let me acknowledge what George has done. He got this subcommittee going and made it relevant to officiating our sport. I know he has put in long hours putting out the newsletter twice a year over the years, as well as maintaining the list of recipients. Thanks to George for all the hard work.

As for myself, I started in track and field while in high school. I was never fast enough to actually compete, but I did develop a love of the sport. I started officiating in the late 70s when the local high school league needed somebody to fill in scoring their meets. While I was teaching, I chose not to apply for national meets since I would have had to be gone from school in the last few weeks of the school year. My first national meet outside Pacific Northwest was the NCAA D-1 meet at Buffalo in 1998 where I was an umpire. At that meet, I met with Emmitt and Audrey Griggs. I had been doing weights

and measures before that, but that meeting led to my improvement in that area. I was

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lucky enough to work with Emmitt and Audrey again the next year in Boise doing weights and measures.

Thanks again to George, I was the head of what was then called the field crew for the 2000 Olympic Trials in Sacramento. That was the beginning of the role of technical manager. With that background, I became one of the first people certified as technical manager.

Let me also take a few moments to introduce Ivars Ikstrums, who is now the editor of this newsletter. Ivars is a former high school and college thrower from the 70s, who took a long hiatus from the sport after graduation. When his daughter took up shot put and discus a few years back, Ivars got involved in helping at the local high school meets. A chance assignment as W&M inspector at the high school league meet led to an introduction to Bob Langenbach. That, and getting to know others from the PNW association, convinced Ivars to get certified himself. His profession as a test engineer allowed him to pick up on the intricacies of W&M very quickly.

When George first asked me to take over the committee, my only question was, would I have to do the newsletter? After meeting Ivars, I knew he would do a great job at that and George and I finalized the change.

I will do my best to live up to the standard set by George Kleeman.

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### E&FS' ANNUAL CONVENTION MEETING

**T**he subcommittee annual meeting is scheduled for Thursday afternoon, December 3, from 4:30-6:20 PM in Indianapolis. An agenda is forthcoming.

### RULE CHANGES AFFECTING W&M OR THROWS

**T**he 47<sup>th</sup> Congress of the IAAF met last month and approved a package of rules changes. A summary of these changes, as pertains to equipment and facilities, is contained below. The complete list of changes can be found at [http://www.iaaf.org/mm/Document/Competitions/TechnicalArea/05/07/43/20090813103134\\_httppostedfile\\_Proposals\\_Rule\\_amend\\_12AUG2009\\_BERLIN\\_12703.pdf](http://www.iaaf.org/mm/Document/Competitions/TechnicalArea/05/07/43/20090813103134_httppostedfile_Proposals_Rule_amend_12AUG2009_BERLIN_12703.pdf)

**Change #34, Rule 160.1:** The kerb on both straights of the track may be omitted and a white line, 5 cm wide, substituted in its place. It is optional to also mark such straights with cones or flags.

**Change #41, Rule 163.11:** Requires the use of ultrasonic wind gauges for any performance submitted for ratification as a world record.

**Change #49, Rule 168.2:** Adds stiffness specifications to the top bar and uprights of hurdles.

**Change #57, Rule 183.11:** Allows the use of other suitable protective material, in addition to tape, at the bottom end of pole vault poles.

**Change #60, Rule 187.4c:** Allows the application of chalk or similar material directly on shots and discuses.

**Change #62, Rule 191.7:** Requires hammer handles to be of a symmetrical design. Also allows the hammer handle brace to be of a curved or straight design.

**Change #63, Rule 211.3:** No longer allows indoor tracks, runways or take-off surfaces to be made of wood. Only synthetic material is now allowed.

**Change #73, Rule 240.2:** Allows the start and/or finish of road races to be conducted on grass or other soft ground.

**Change #75, Rule 240.6:** Allows a road race to be started by the firing of a canon, air horn or like device (in lieu of a gun).

### EQUIPMENT CORNER

**I**f you have any information on equipment that you have purchased or built to help with your weight and measures or technical managers' activities, please pass along the information. One of our goals is to disseminate that kind of information.

#### 1.5 kg discus gauge

The WMA changed the 1.5 kg discus specifications about six years ago. However, there are still many gauges in use that are of the older, now obsolete, specifications. You should check your 1.5 kg gauge for the following measurements:  
Diameter: 200 – 202 mm  
Thickness: 38 - 40 mm

Additionally, the gauge should also contain both minimum and maximum rim thickness measurements of 12 mm and 13 mm, respectively. If ordering such a gauge via the web, you should first call the vendor to ensure it provides the above measurements.

One source of current laser-cut stainless discus gauges is: Terrene Engineering  
800-513-5416  
<http://www.terrene.biz/>

14 gauge stainless steel is recommended. Their gauge part numbers are:

D-0750	for 750 g discus
D-100	for 1.0 kg discus
D-150	for 1.5 kg discus
D-160	for 1.6 kg discus
D-175	for 1.75 kg discus
D-200	for 2.0 kg discus

## THE TRAINING CENTER

**T**his is a regular feature of this newsletter, where we discuss the method of measuring an implement, venue or a track facility. Your comments or areas of interest are welcome. It is through this kind of dialogue that we learn from each other and improve our skills. Send the editor your stories and questions.

### Mini-javelin balance problem

The following correspondence was received from Bruce Long. Anyone owning a mini-javelin is encouraged to check it for proper balance.

*I want to pass a bit of information on from our experience with mini-javelins this year. The new model VIII mini-javelins that were supplied to both the Youth National Championship and the JO National Championship did not pass certification because of a balance problem. Richard and Jo are aware of the problem since they handled weights and measures for the Youth Championship. Then the same problem occurred at JOs. All of the implements have a balance point between 385mm and 390mm from the tip. The spec allows 365 to 380. I have checked about 25 of these new mini-javelins and they all have the same balance problem. Richard was unsuccessful in his attempt to make modifications and bring them into spec at the Youth meet. We were forced to gather up personal implements for use in the meet. At the JOs we had model VII mini-javelins sent overnight. They were all in spec. Bruce Long*

### Javelin length problem

At last year's Masters National Championships in Spokane, WA, no less than five new or near-new javelins were DQd for being over the legal length. One was 3 cm overlength. At the recently-concluded Masters National Throws Championships in Portland, OR, two 500 g javelins were found to be 4 cm overlength. None of these were "old rules" javelins.

It is suspected these were manufactured as training javelins, but mistakingly purchased by athletes, believing they were competition javelins. These findings underscore the necessity for careful implement inspection, even if time only allows the basic measurements to be made.

### Throwing weight structural problem

During weigh-ins at a recent Seattle masters meet, a 25 lb weight was noted to have a loose swivel plug. That is, although the plug appeared to be screwed all the way into the head, it noticeably rocked back and forth within the head. The plug was removed to investigate the reason for this.

The weight was of a typical construction, with a metal (steel or iron) shell that is filled with a heavy metal (probably a

lead alloy). The shell had a clean hole where the swivel is installed, without any threads. The threads were cut into the inner metal, which is undoubtedly softer than the shell.

The inspection revealed that a significant number of the inner threads had disintegrated, providing space for the plug to move. The threads on the plug were undamaged. It was a matter of time before the remaining inner threads would have stripped out, providing an unanticipated conclusion to a weight or superweight throw. This weight has been permanently retired.



Full threads on one side

Partial threads on other side



Swivel plug

### Soft hammer head

A new 12 lb hammer demonstrated its soft side at a recent association JO meet. It hit a cage door post near the top (making it a glancing angle at best), then fell about 15 feet to the ground. An inspection showed two prominent flat spots, suggesting the shell was quite thin.

This underscores the need for the implement inspector or head judge to examine any implements that encounter substantial impacts during a throw.





Damaged hammer head

### Hammer handles

Hammer handles experience significant loading during a throw. Accordingly, they should be examined critically to catch failure mechanisms that are developing.

The following images show what appears to be a hobby-shop repair of a broken handle. The brace on one side has been punched through the grip and ball-peened in place. A hairline fracture is visible on the side of the grip. Handles like this are not safe and must be removed from the throwing inventory.

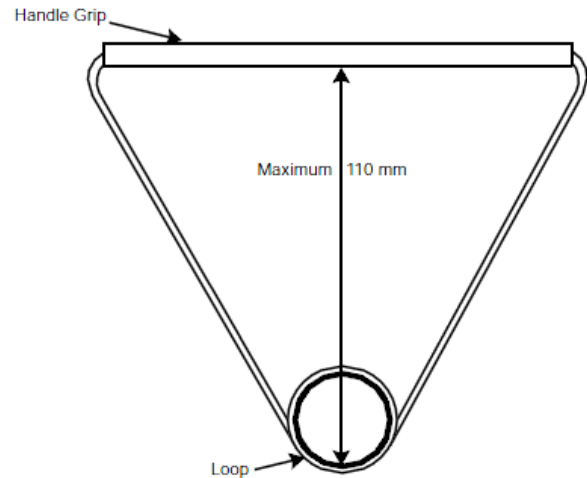


While on the subject of hammer handles, a note should be made about the current IAAF handle specification, which is also reflected in the USATF and NCAA rule books.

A recent communication with George Kleeman indicated that the IAAF conducted an in-depth study of hammer handles following the Sydney Olympics. The outcome was a set of specifications concerning the handle size and strength.

While the strength specs are aimed at the manufacturers, the size should be checked by the implement inspector.

The maximum length between the bottom of the handle and the bottom inside of the loop is 110 mm.



Recent experience indicates there are still many handles in use that exceed the 110 mm limit. These need to be identified and exchanged with a current handle design.

The following notes about the handles also apply:

- The grip may be straight or curved
- The sides may be straight or curved
- It must be of a rigid design, without any hinging or moving parts
- NCAA requires a single- or double-loop design; IAAF and USATF do not

### A blast from the past

This hammer is tagged as being of 19<sup>th</sup> century vintage:





**Annual Certification of your Implement Equipment**

With the indoor season starting in just a few months, you should be doing an annual check of your implement equipment and also before any major competition. The NCAA recommends that all such equipment for weighing and measuring implements be certified for accuracy by an appropriate testing agency in accordance with methods specified by the manufacturer in order to comply with Rules 6-1.12 which deals with implements meeting specifications. The USATF and IAAF rule books are not as specific but both call for calibration of such equipment. See Rule 148. If you aren't doing this annually for the equipment you use, you should be. Many of the new electronic scales have internal checks but you should also have an external check. This can be done by the scale retailer or your local county weights and measures department. You can also purchase calibrated weights from several of the track equipment suppliers. Likewise you need to check your templates with good calipers. Make sure there isn't wear so the template is oversized or that it is bent. Know whether your templates are right on or slightly loose or tight so that you can interpret correctly when an implement measurement is close to the maximum or minimum dimension. If it is, always attempt to measure it in an alternate manner, either with alternate template if one is available or with calipers if a big enough one is available. Never force an implement into the template since you may cause wear or bend the template. This is particularly true of the thinner templates. If you don't have a 12 and 13 mm thickness gauge for the discus you need to get one. Clearly now all the rulebooks are intending to use all of the IAAF specifications for implements with the exception of the discus for high school since they allow rubber discuses. But even there most of the specs are the same. For example, the NCAA has added the words to each outdoor implement description that the implement will conform to IAAF published specifications.

**UPDATED DOCUMENTS FOR 2009**

The **W&M Handbook** has been updated for 2009. This version is now available and can be downloaded at no cost from the USATF Officials website at

[http://www.usatfofficials.com/training/WMManual\\_2009-0-1.pdf](http://www.usatfofficials.com/training/WMManual_2009-0-1.pdf)

The **Ultraweight rules supplement** was approved by the Masters Subcommittee at the last USATF annual meeting. The manual can be downloaded at:

[http://www.pntf.org/masters/documents/Ultraweight Rules Monograph 12-14-08.pdf](http://www.pntf.org/masters/documents/Ultraweight_Rules_Monograph_12-14-08.pdf)

Recent IAAF manuals can be found at:

<http://www.iaaf.org/competitions/technical/regulations/index.html>

**USATF RULE BOOK ERRATA**

**2009 Rule Book Errata #1**

At the last USATF annual meeting, a change was approved to the Ultraweight Pentathlon weight vs. age group table (Rule 203.3). However, a typo also found its way into the amended table. Note that the women's open-49 age group is shown as throwing four implements. This is incorrect; each age group throws three implements.

To correct this error, readers are requested to DELETE the "x" in the table corresponding to the 35 lb weight for the women's open-49 age group. The corrected table should appear as:

Age Group	Weight #	Super-Weight #	35#	44#	56#	98#	200#	300#
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**MEN**

Open-49	35	56				x	x	x
50-59	25	56				x	x	x
60-69	20	44			x	x	x	
70-79	16	35		x	x	x		
80 +	12	25	x	x	x			

Age Group	Weight #	Super-Weight #	25#	35#	44#	56#	98#	200#
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**WOMEN**

Open-49	20	35			x	x	x	
50-59	16	25		x	x	x		
60-69	12	25		x	x	x		
70 +	12	20	x	x	x			

Note: this error will be corrected in subsequent printings of the rule book.

## 2009 Rule Book Errata #2

The NOTE under 201.3 and 203.3 reads: "For Masters exception, see Rule 332.2(i)". Readers are requested to change the reference to "332.2(h)", as a rule deletion at the annual meeting in Section 332 caused all the subparagraphs to be renumbered.

## CERTIFICATION

**H**

ow do I become certified Implement Inspector, a Technical Manager or recertified if I have let my membership lapse? Currently USATF is the only organization having a national training and

certification program for Track and Field officials (particularly in the area of Implement Inspector or Technical Manager).

You can become an USA Track & Field official by contacting your local association. To find out whom to contact, send the editor a note and he will send you your local contact name and the Weights & Measures open book review. This review is intended to test you on your knowledge of Implement Inspection techniques and Implement specifications so that you can be certified in this specialty. It covers all of the rulebooks. See the next article on the handbook. If you would like to have a clinic let the editor know. He can try to get some nearby clinicians to help out. There is also a review for becoming a Technical Manager. Both specialties have monographs which explain their duties. If you're interested in the Technical Manager's specialty contact Bob Springer for more details. The reviews, as well as the monographs, are available on the Officials website at [www.usatfofficials.com](http://www.usatfofficials.com) under Certification.

## US HISTORY OF W&M AND THROWS

**S**

purred by a talk by Eric Zemper on the history of Rules given at the Olympic Trials, George Kleeman has begun to collect information on the history of Implement Inspection in the United States. If you have any knowledge of when and who started to do implement inspection in your association, George would appreciate an email or letter giving him some details. He has some limited details concerning people and equipment used in the Pac 10, West Coast, Iowa and New England but needs information on the rest of the country. George has started to compile the history of implement specifications as recorded in the various rulebooks. It has been an interesting exercise. If any of you know of a printed history for either, please let him know.

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