

February, 2007
Volume 17-1



The Equipment and Facilities Specifications Newsletter

An official copyrighted publication of the Equipment and Facilities Specifications Subcommittee
of the National Officials Committee in its 17th Year of Publication

WELCOME TO NEW SUBSCRIBERS

This Newsletter is a semi annually educational tool for Weights and Measures, Technical Managers, interested Throws Officials, and certification chairs. Input and suggests are always welcome. This copy is being sent to about 650 officials around the world. Welcome to our 17 new subscribers this year.

Last Name	First Name	Association
Anderson	Dennis	Pacific
Boot	Michael	Pacific
Cella	Ann	Nevada
Fairchild	Douglas	West Texas
Fluker	Charlene	Southwestern
Gale	W.Patrick	North Carolina
Gilchrist	Eric	North Carolina
Johnson	Edward	Southwestern
Jones	Courtney	North Carolina
Ligon	Lucille	Pacific
London	Wilbert	Southwestern
Lorenz	Carol	North Carolina
Payne	Timothy	Southwestern
Rosko	Kevin	Niagara
Sherrard	Cherrie	Pacific
Tyson	David	Southwestern

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. 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 CURRENT E-MAIL ADDRESS.

Editor: George Kleeman
5104 Alhambra Valley Road
Martinez, California 94553-9773
Home 925-229-2927
E-mail: george_kleeman@comcast.com



E&FS's ANNUAL CONVENTION MEETING

This year the convention was in Indianapolis and our annual meeting was held on Thursday, afternoon at 4:00. We had 47 people in attendance. The agenda is in the last newsletter and the meeting notes follow:

Chair George Kleeman called the meeting to order at 4PM. Everybody introduced himself or herself. The minutes from 2005 were corrected by changing Bill Boyd to the Virginia Association and then approved. The agenda was reviewed and approved.

OLD BUSINESS

2006 Goals

Two newsletters were written and sent out by George. No track specifications were received this year.

Implement problems in 2006

When do you impound a cracked discus? When it is unsafe. A small crack is OK. We then discussed the accuracy of our measurements, particularly as it was related to the discus. The recommended accuracy for implement measuring equipment is +/- 0.2mm. See W&M Manual Pg.9, available on www.usatfofficials.com/training/WMMManual%202006%20rev2.pdf. This is only slightly less than the expected accuracy for laser cut implements such as those made by Gill and probably Daktronics. (Note: The normal tolerance specification for laser measurement of +/-0.005 inch or 0.127 mm.) If your having problems check your gauges. If you have a second set available, if it passes on either set let it go.

Tony Wayne discussed the compression of the indoor shot with pictures. The reason for the change in the weight throw was discussed. Since the weight throw is not competed indoors by the IAAF, specifications are set by USATF. NCAA tends to use our specifications. (Note: Subsequently, the proposed rule change was tabled by the Rules committee and a study committee made up of several of the manufacturers was named to submit any necessary rule changes next year.)

There was a discussion about using a power ball inside a weight bag. But because it is not a solid sphere, it was deemed illegal even if it met the weight specification. Note it would tend to have the weight distributed unevenly and more to the bottom of the bag, which would be an advantage.

NEW BUSINESS

There is a new discus for the Masters at 0.75kg. Rather than buy a new gauge from Gill or Daktronics, George suggested that you buy a caliper with at least 3-inch long jaws to measure the discus. This instrument can then be used to verify your other instruments and measure other implements as a backup device.

How do you annually certify your scale? The county or state normally has a Weight and Measures department. A suggestion was made to get your scale certified and then make or buy weights known/ specified to be a specific weight. These should cover the range you plan to weight over. These weights are used to check the linearity and accuracy of your scale during the year. So that they remain good standards, carefully store these weights away so that they don't corrode, so, next year or when you need to, you can verify that your scale is working correctly and that you get the same weight again. Normally you should have at least two and possibly three weights, which cover the range say from 400g to 8 kg.

The meeting was adjourned at 6:00.

Win Eggers, Secretary

THE TRAINING CENTER

This 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.

As discussed at the Convention, it is important that you understand how accurate your equipment is so that in making the go-no going acceptance decision that you don't try to be more exact than your equipment. What do I mean? The W&M Manual discusses tolerance and accuracy but I want to re-emphasize it since I have observed some officials trying to be to exact. All measuring equipment has some error related to its manufacture. The more expensive and the better cared for, the less the error. Take for example you want to measure a length which is suppose to be 0.500m or 500mm or 50 cm. Your reference standards or measuring ruler is from the Bureau of Standard and are 1mm and 1m by definition. Although even these standards are copies and although probably accurate to 1 part in 10000 still have that tolerance or potential error. Having those two rulers if you will, which would be the more accurate way of measuring the 0.5 m implement? Is it to use the 1mm 500 times or the 1 meter and divide it in half. Just the act of using something very accurate but 500 times will lead to more error than dividing the 1 meter ruler in half. The point of this is illustration is to show that there is always some uncertainty in any measurement. So within that uncertainty or tolerance that is as accurate as you can be. Based known tolerances for Trackmaster™ and similar equipment, even when laser cut, the committee recommends a tolerance of 0.2mm. For weights generally the tolerance is 1 or 2 grams for most of the scales being used. That means you can't tell the difference between a javelin at 598g and one at 600g so you need to pass both if you scale is good to +/-2 g. If your scale only reads to 2 places or 4.00kg then you can't see a light shot that is anywhere from 3.991 to 4.009 kg most likely.

Depending on your scale it may round off up to next weight it can record once it is over 3.99kg. Equally important is the measurement of small dimension such as the diameter of a javelin at 25 or 30 cm. The scale on the Trackmaster is probably not got to even 0.2 cm. The same would be true of measuring the edge of a discus with anything but a cut out to get the 6mm depth. These are small dimensions and therefore very hard to measure accurately. Do the best you can but if they are close or you have to force the gauge then you are probably within the tolerance of your gauge and therefore should pass the implement. Remember the benefit of the doubt should go to the athlete. Small variations probably do not give significant advantage if any. This is consistent with the philosophy in the handbook that if you measure an implement several times and or with several measuring devices and it passes at least several times but also fails a few times it is probably close enough to specification that you should certify it. If you have concerns then don't pass it but be ready to defend your position to the athlete, the coach and the referee. If you get repeated failures on several implements, check your measuring device with a standard or another device such as a calipers to make sure it has moved or been bent.

David Post suggested the following weight implement problem and his solution. "Metal weights are still used at the Harvard indoor track facility since the impact area is clay. During a weigh-in session this indoor season, there was a few steel ball 20 lb weights that were whopping 0.4 lbs light which is quite significant. I offered to repair these weights and when I opened them, there was absolutely no volume available to added lead shot. I believe that the problem arose due to the density difference between steel and brass. The manufacturer should have known this and accommodated the difference with a larger diameter ball. The weight was corrected by adding a heavy and very tough protective vinyl hose over the links in the same fashion as the typical indoor weights use to help protect the floor. I believe this to be a legitimate fix."

Certainly it is for a USATF event and upon reflection I think even for a NCAA event. Well what about the note following Rule 10-9-3 namely: .. *"Homemade or modified implement are not allowed. Repair of broke implements may be made only with the original manufacturer's replacement parts"?*

Normally both David and I would tend to say no to almost anything that is added to an implement. But David goes on to say, "this note was intended to eliminate bogus modifications that are easily removable, don't belong or could fall off. This hose section isn't easily removable, all indoor weights come with this on them so everyone should be familiar with the appearance and, believe me, this can't fall off. Besides myself, no one except the manufacturer would even give this a second thought that it didn't belong there. However, even with all that, I might tend to say no at first sight." David's interpretation was confirmed by Bob Podkaminer with several members of the NCAA rules committee and they agreed that it would be acceptable "because of what was used to add the weight, and how it was done. In particular, although it is a stretch, a synthetic covering is allowed, and the note does not say where, and should that be considered a modification. The implement is comprised of all parts."

Bob went on to say that the "original authors were trying to make sure that

commercial implements were used instead of those made in a metal shop class, to promote a safer set of conditions. Regarding the 'repair' aspect, think more about repairs to correct a structural failure", i.e., a broken strap or link. "The same goes for modifications, think structure."

"I realize that a strict interpretation could go either way and that some 'fixes' would not be appropriate to preserve the validity of the implement. But in this case, I think the solution was a good one, maintained the validity of the implement and could loosely fit into the restrictions of the note within 10-9-3 when the whole picture is examined."

In examining this example think about what is trying to be accomplished. First, does it impact or improve safety? Second, does it give the athlete an advantage over another athlete? Third, does it meet the intent if not the letter of the rule? If you have can honestly say it does not impact safety or it improves safety, it does not give an advantage and it meets the intent of the rule then it should be considered acceptable as this fix was deemed. This is the type of logic you should use when interpreting the implement rules. What are your thoughts?

Finally just a word on safety which needs to be foremost in our minds particularly for those of us involved with throwing things. From a weights and measures standpoint Mark Heckel, Master USATF Official and Safety Officer for the National Throws Coaches Association, suggest the following list:

- Shot put
 - Examine for burrs or protrusions on the surface
 - On indoor implements, look for loose or missing core plugs
 - On indoor implements, look for cracks or splits in the outer shell
- Discus
 - Look for burrs or protrusions on the rim
 - Check for loose or missing core plugs
 - Look for split or cracked body plates
 - Check that the body plates are secure
- Javelin
 - Look for loose or frayed grip cord
 - Inspect points for cracks or splits
 - Inspect the body of the implement for cracks or splits
 - Look for broken points (both front and back)
- Hammer/Weight
 - Look for unbound wires
 - these can cause an errant throw to hang up in the cage or to tear the cage material
 - Inspect wires for nicks or cuts
 - Look for loose or missing cores (weight implements)
 - Inspect handles for cracks, or so see if they are sprung and no longer useable
 - Inspect gloves for smoothness
 - Inspect indoor weights for loose, cut or broken straps

See <http://mach2k.net/NTCA/safety/page1a.htm> for more information.

APPROVED RULE CHANGES AFFECTING US

This was a Rules Change year for USATF. The following items were approved. See the last newsletter and www.usatfofficials.com under Rules for details and a full listing of all rule changes for 2007.

a) Item 25: Replace Rule 148.3 with the following:

All implements used on the field of play must be weighed on a governmentally approved scale, or a scale that has a known calibration and linearity, and measured to ensure they meet other specifications required herein. Implement certification devices shall be constructed such that the gauges are within acceptable tolerances to assure the legality of the implements for the specified competition. In the case of a record, implements shall be impounded and measured prior to continued competition use to assure it meets the specifications for a record.

Note: It is advisable to have at least one and preferably two calibration weights which are traceable to government standards in order to routinely confirm calibration and linearity from 1 kg to 8 kg.

b) item 41 Amend Rule 189.2(c) by adding: "The sides and rim of the discus shall be intact, showing no signs of significant cracks, gouges or breakage that would reduce the integrity of the side or discus as a whole."

c) Item 42 Rule 189.3 New specifications for 0.75 kg discus.

d) Item 44. Tabled A subcommittee was named to make suggestion on improving the weight implement definition. It includes several manufacturers' representatives. There were no changes made this year.

e) Amend Rule 195 as follows:

Add a new column for 20 kg (44lb) weight implement. The only specifications are total weight of 20.000kg and total length as with all weights. There is no diameter restriction.

The other changes are not directly involved with implement inspection.

EQUIPMENT CORNER

If you have any information on equipment that you have purchased or built to help with your weight and measure activities, please pass along the information. One of our goals is to disseminate that kind of information.

Polanik has now come out with a hammer handle which is suppose to meet the IAAF/USATF standards. I have not yet seen one so I am not sure how you can tell that it meets the new standards.

There has been a change in the settings for the NCAA hammer cage. For the existing cages with an 8-9 meter

opening between the gates, set the end of the close gate 1.6 m inside the sector line or perpendicular to the line if it isn't long enough to go 1.5 m into the sector for all competitions. This is the change from 2006 for the NCAA returning to the setting previous to 2006. The end of open gate is set 2.85 m from the sector line in NCAA competitions and 1.1 m in USATF or IAAF competitions. If you have an IAAF type cage then set it according to the recommendations in the IAAF book which is parallel to the line when the gate hinge is 7.8m from the center of the hammer circle and the distance between the gate poles is 6 m. Note there are new cage specification recommendations in both the IAAF 2006-2007 Handbook and the 2007 NCAA Rulebook.

CERTIFICATION

How do I become certified Weights and Measures Official, a Technical Manager or become 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 Weights and Measures Officials or Technical Managers). 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 the appropriate address.

If you have Internet access, you can look at the Association's Web page, which is part of the USATF Website. It can be found at <http://www.usatf.org/about/associations.htm>. The Certification Chairs are also listed in the Officials' web site at www.usatfofficials.com under the Certification Chair, Jim Flanik. In addition to the paper work that your local association requires to become a certified official, your local Officials Chair can send you the Weights and Measures open book exam. This exam is intended to test you on your knowledge of W&M techniques and 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 currently no test for becoming a Technical Manager. However, both specialties do have monographs which explain their duties. If you're interested in the Technical Manager's specialty contact George Kleeman for more details. The exam is also available on the Officials website under Certification.

UPDATED W&M HANDBOOK FOR 2007

An updated version of W&M Handbook (30 pg.) with all the changes for 2007 is now available and can be download at no cost from the USATF Officials website at [http://www.usatfofficials.com/training/Monograph-WeightsandMeasures\(2007\).pdf](http://www.usatfofficials.com/training/Monograph-WeightsandMeasures(2007).pdf). For you throwing officials the Throwing Manual has also been updated and can be found at the same location. An updated version for 2007 is now available on the website.

George Kleeman
5104 Alhambra Valley Road
Martinez, CA 94553