

October, 2003
Volume 13-2



The Equipment and Facilities Specifications Newsletter

An official copyrighted publication of the Equipment and Facilities Specifications Subcommittee of the National Officials Committee

WELCOME TO NEW SUBSCRIBERS

This Newsletter has been sent semi annually as an educational tool to Weights and Measures and interested Throws Officials, and certification chairs for twelve years. This Olympiad I have added those of you who inquired about becoming Technical Managers. This copy is being sent to about 770 people of whom 600 are certified W&M Officials. Welcome to our new subscribers.

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Mildred	Bone	Arkansas
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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 YOUR GETTING THIS BY MAIL I DON'T HAVE YOUR CURRENT E-MAIL ADDRESS.

E&FS's ANNUAL CONVENTION MEETING

The annual meeting of the committee will be held on Thursday, December 4th at 5:30 pm. The agenda is below.

Greensboro 2003 Agenda
December 4, 5:30 pm- 8 pm, Thursday
Sandpiper, 3rd Floor

Introductions

Approval of 2002 Meeting Minutes

Agenda Review and Approval

Old Business

Status of Action Items/Goals from 2003

Implement Problems in 2003

ASTM Pole Vault Committee Report

New Business

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Rules Changes for 2004

Goals for 2004

New Olympiad Rules Review

Action Items for 2004

The annual report has been forwarded to the National Officials Committee and will be included in the officials' convention handout.

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. The IAAF now has their approved equipment list on line at the following address: <http://www.iaaf.org/downloads/type=publications/index.page=2.htm>

David Post, Master Official from the New England Association and member of the E&FS Committee answered the following questions that we received this summer.

Gill has an indoor shot that is the color blue that tends to flatten out on impact and it also, feels tacky like rubber. A Gill representative told me He thought it was fine, but the athlete should try to round it out by hitting it on the ground. Have you seen this shot and can you give me any feedback on its legality. Dave wrote back: I've seen the shot that is mentioned and it is somewhat similar to the, so called, "malleable shot" (in terms of tackiness) that we used to see indoors and we only see occasionally now. The Gill shot is not malleable because it returns to its spherical shape after impact. It is smooth, as required by the rules, but the rubber is somewhat tacky, thus, affording a better grip. This could be simulated by applying a substance to the hands, so, I'm not worried about the tackiness of the rubber infracting the rules. However, the gripping action of the fingers and the throwing action can cause the fingers to sink into the shot, thus, affording a better grip. In my opinion this **IS** an infraction of the rules. However, I do believe that using this kind of shot is a slight disadvantage to the putter. As I mentioned above, this shot will deform when thrown and the >force that causes this deformation comes from the thrower. Since there is no >way to recover this force (energy), there is a net loss in distance for each throw. A non-deformable shot wouldn't experience this type of energy loss and theoretically would go further with the same force being applied. Also, the majority of the throwers I've talked to don't like it.

In a second e-mail, Dave answered the following question: Assume two discs. One is the rule book 1.75 Kg Junior Men's discus. The other is a 2.0 Kg Open discus that has the weight reduced to 1.75 Kg. Is there an advantage to throwing the larger discus? I understand more area for lift, but are there other factors involved? Would the level of experience and skill make a difference as well? In other words, would more spin make a difference?

Dave's answer: In this case the larger diameter theoretically affords the thrower added lift and, thus, more distance. There is also more drag due to the additional surface area but if the discus is thrown correctly the lift should be greater than the drag. The other aspect of the throw dynamics is stability. As you know, stability is achieved via the discus rotation, i.e., gyroscopic stability as in a kid's toy "top". The longer the discus is in the air, the more stability that is required. In order to get more stability, the moment of inertia must be increased. This is accomplished by placing more of the discus weight at the rim. What most people forget is that

the higher the inertia, the more strength that is required to spin it, thus, high inertia discuses are for world class throwers only. Now to answer your question. A strong thrower would have a definite advantage and a weaker thrower much less an advantage.

RULE CHANGE PROPOSALS

Although this was not suppose to be a Rules Change year for either IAAF or USATF there are still a number of emergency rules that were accepted. The following are the IAAF rule changes that affect throws and W&M officials. I expect most to be adopted by USATF.

Draft Item 7 - 2002 Tabled Item 144 Amend Rule 241 and 242.5 by adding to the list of events and regulations and specifications Intermediate Division & Young Men's/ Women's Division Hammer (B 12lb - G 4kg).

Draft Item 14 - IAAF Item 92-Add a new Rule 50.7 as follows: Ultrasonic wind gauges should be used at all championships.

Draft Item 31 - IAAF Item 116- Replace the Note following Rule 201.4 as follows:

Effective January 1, 2005, this section shall be amended to read: Handle. The handle shall be solid and rigid made in one piece without hinging joints of any kind. It shall be isosceles triangle or sector of a circle shaped. The handle shall not stretch appreciably while being thrown. It shall be attached to the wire in such a manner that it cannot be turned within the loop of the wire to increase the overall length of the hammer. The handle may have a curved or straight grip with a maximum width inside of 130mm and a maximum length inside of 110mm. The minimum handle breaking strength shall be 20kN (2000kgf).

Draft Item 32 - IAAF Item 105- Amend Rule 204 as follows:

... ((The pole may, however, have a binding of not more than two (2) layers of adhesive tape of uniform thickness. The restriction to tape does not apply to binding the bottom end of the pole with protective layers of tape, for a distance of 30cm.)) At grip and at bottom end, the pole may have protective layers of tape.

Draft Item 33 - IAAF Item 117 - Amend Rule 205.1 as follows:

Construction - The javelin shall consist of three main parts: a head, a shaft, and a cord grip. The shaft may be solid or hollow and shall be constructed of metal or ((of another)) other suitable ((homogeneous)) material so as to constitute a fixed and integrated whole. ((,and)) The shaft shall have fixed to it a metal head terminating in a sharp point.

Draft Item 34 - IAAF Item 117 - Remove Note following Rule 205.6 and then add to the end of Rule 205.6 as follows:

The head shall be constructed completely of metal. It may contain a reinforced tip of other metal alloy welded on to the front end of the head provided that the completed head is smooth and uniform along the whole of its surface.

Draft Item 35 - IAAF Item 110 - Amend by adding as 4th sentence to Rule 217.2 as follows:

The upper part of the indicator board shall also be covered by a plasticine layer for approximately the first 3mm and along its entire length. The board shall be mounted ...

Draft Item 36 - IAAF Item 104 - Amend Rule 218.1 as follows:

... For the Pole Vault, it is required that the metallic structure of the base and the lower part of the uprights be covered with padding of appropriate material in order to provide protection to ((an athlete who may land on it)) the athletes and the poles.

Draft Item 37 – IAAF Item 102 - Amend Rule 218.3 as follows:
... These end pieces shall be hard and smooth ((, with a semicircular cross-section)). They shall be circular or semicircular with one clearly defined flat surface on which the bar rests on the crossbar supports. These flat surfaces may not be higher than the center of the vertical cross-section of the crossbar.

Draft Item 38 – IAAF Item 106 - Amend by adding as a 2nd sentence to Rule 218.11 as follows:
The front pieces of the Pole Vault pad should be 2m long. There shall be a minimum of 5m of landing surface behind the box. ...

Draft Item 43 IAAF Item 24 Modify Rule 211 such that the width of the mouth should be 6m positioned ((5m)) 7m in front of the center of the throwing circle for the discus. Reason it reduces the maximum danger sector from 98 deg to 69 deg.

Draft Item 44 IAAF Item 27 Modify Rule 211 for the hammer cage such that the width of the mouth should be 6m, positioned ((4.2m))6.94m in front of the centre of the circle. The height of the netting panels or draped netting at their lowest point shall be at least 7m for the panels/netting at the rear of the cage and at least 9m (maybe 12m!!!) for the last 2.74m panels to the gate pivot points. Reason:

To take full advantage of the reduced landing sector it is necessary to change the shape of the front of the cage but still retaining the 6m wide cage opening so as to make it easier to modify existing cages. Two additional panels each 2.74m long and at least 9m high are inserted before the relocated gate pivot points parallel to the landing sector centre line.

Equivalent throwing danger zones can be obtained by increasing the length of the existing gates to 3.15m without moving the gate pivot points but the proposed new design will give the athletes greater comfort as there is less likelihood of a hammer rebounding on the athlete throwing. Also longer gates are more difficult to move and are more affected by winds.

Draft Item 45 IAAF Item 29 &30 Modify Rule 211 for common cage such that the shape of the rear of the cage shall then be enlarged using a minimum of ten fixed panels or the equivalent in draped netting and two moveable panels 2m wide. The gates shall not be used for discus throwing. Reason: The maximum danger sector for hammer throws from this cage is approximately 53° (down from 85 degs,) when used by both right and left-handed throwers in the same competition.

In my travels this year, I have observed that the rule changes changed last year by USATF and IAAF concerning the vertical jumps were not always enforced. Possibly this was because equipment was not available or locations thought the rules might be changed. This has not happened and for both safety, qualifying and record reasons please be sure to comply with the rules concerning length of pegs, configuration of bar ends and use of safety collars and location of the pit relative to the box. Your liability is much higher if you do not enforce these changes. The following is an illustration of the acceptable and banded ends for crossbar for USATF and IAAF. The High School and NCAA rules have not been changed.

As a result of the work by the ASTM Pole Vault Committee, Skydek has developed a new pole vault box which greatly reduces the impact on a vaulter landing in the box area.



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.

Some of you may have seen the robotic device used at the World Championships in Paris to retrieve the implement from the field. It was a remote control car, i.e. a Corvette Coupe, which was fitted with a trailer and a couple of tubes to balance the javelins. The model was about 1 foot long with a trailer that was about 9 inches. Don't know if some of the bigger Radio Shack model cars might be similarly converted.

Comments and Suggested Modifications for the Gill Implement Certification System Model 4225

by Dave Post, USATF Certified Official, Facilities and Equipment Specifications Subcommittee of the USATF National Officials Committee

I purchased this system from Gill several months ago and after extensive use I have generated the following comments and suggested modifications:

Scale

1. The "bulls eye" bubble level is not visible through the top plate (the plate the screws to the top of the scale). I would suggest cutting a 3/4" hole in this plate to align with the bubble and, thus, form a viewing port.
2. The plastic cover over the scale is a nice and needed feature.
3. Having both battery and 110v AC power is necessary.

Javelin Overall Measurement

1. To my knowledge this feature is not included with any manufacturer's measuring equipment. The rationale for not including this is fairly obvious.
2. I have designed and constructed a lightweight measuring device that accommodates all 5 javelins and fits into the existing carrying case. The design is very simple and based on a carpenter's 6-foot scale which folds up. See attached photo.

Hammer Length Stand

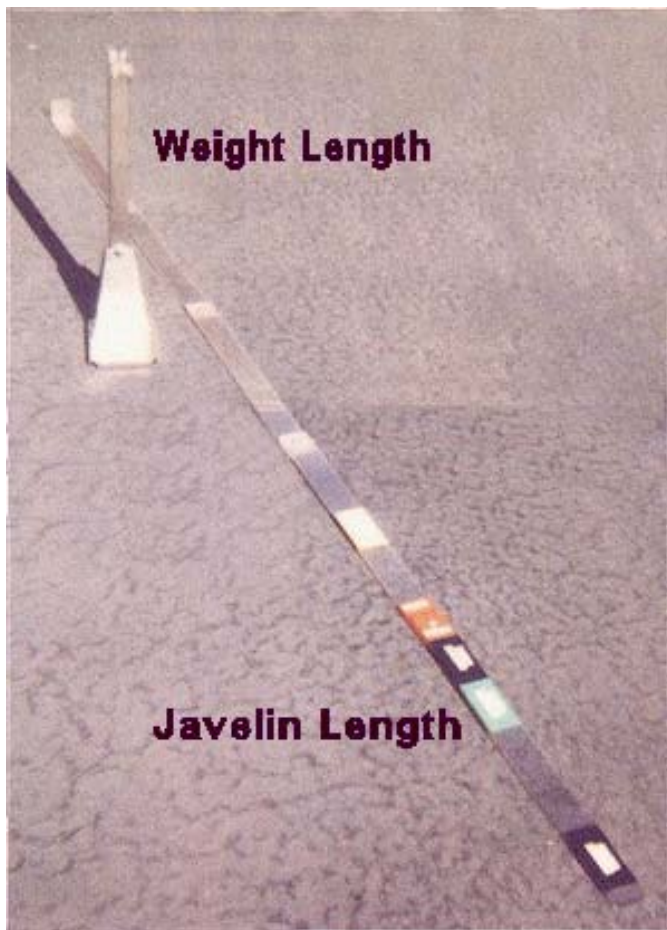
1. The inclusion of a tensioning handle is a good idea and is needed in some cases.
2. The necessity of assembling all 4 pieces of this stand in order to measure the lengths of the indoor weights makes this device difficult to use and potentially dangerous.
3. I have found that the stand can be simply modified such that the top and the base sections will fit together. One hole must be

added to the base to align with the second threaded hole in the top section. A sixteen-inch location must then be added to the base.

Javelin Balance Bar

1. This device is very convenient to use as compared to other devices which require it to be turned end to end on occasion because it is designed to measure in different directions depending on the javelin weight.
2. The balance bar contains both the maximum and minimum measurement of all 5 javelins. This makes things difficult

Photo Showing Javelin Overall Length Measuring Device and 2-Piece Assembly of Weight Length Measuring Stand



because there are too many numbers in one spot. I recommend marking the maximum dimensions with a colored

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dot of paint. Alternatively you might consider eliminating this dimension since in all my years of measuring javelins, I have never used the minimum balance length. This would make it much easier to use for all 5 javelins

3. Add the balance location for the Mini-Javelin.

CERTIFICATION

How do I become a 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 a 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' section of the web site. 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. Note all current officials have to be recertified for this Olympiad ending in October 2004. 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.

UPDATED W&M HANDBOOK FOR 2003

An updated version of W&M Handbook (29 pg.) with all the changes for 2003 is available. Until it gets on the website you can make your request to georgeklee@aol.com. Hard copies are available from the editor for \$3 to cover the cost of reproduction and mailing but please make that your last resort.