February, 2008
Volume 18-1

The Equipment and Facilities Specifications Newsletter

An official copyrighted publication of the Equipment and Facilities Specifications Subcommittee
of the National Officials Committee in its 18th 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 new subscribers this year.

Last Name	First Name	Association
Brown, III	James	Tennessee
Cargile	Robert	Tennessee
Cestaro	Luciano	Italy
Crow	Stephen	Pacific
Decatur	Gail	Pacific
Ikstrums	Ivars	Pacific Northwest
Jacobsmeyer	Al	Pacific
Lenart	Bruce	New Jersey
Magaraggia	Roberto	Italy
Rycek	Joseph	Mid Atlantic
Williams	Karen	Pacific

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.

E&FS's ANNUAL CONVENTION MEETING

Last year the convention was held in Hawaii and our annual meeting was held on Thursday afternoon, November 29, from 3-4 PM. Nine members of the committee were present along with guests.

Minutes

The meeting was called to order by Chair George Kleeman at 3PM. Everybody introduced themselves. The minutes from 2006 were corrected by changing Dale Mulanex from a guest to the racewalk representative, and then the minutes were approved. The agenda was reviewed ..

OLD BUSINESS

Two newsletters were written and sent out by George.

In the weight throw, the bladder specifications have been tabled for this year but hopefully the task force named by the Rules Committee will have a recommendation by next year.

The hammer handle specifications have changed again. There is no longer a width specification only the distance from the bottom of the handle to the connection which can't be longer than 110 mm. Likewise there is no requirement on shape in USATF or IAAF.

However, note the NCAA still has the 130 mm maximum width requirement and the sides must be straight or slightly curved.

NEW BUSINESS

The NCAA may be using electronic foul indication for long and triple jump at the national championships next year. Some of the rule changes for this Annual Meeting concern the elimination of the maximum javelin runway length, the cartwheel shot put technique being illegal; updating several specs for the discus to conform to the World Masters' specification, and the addition of the 0.75 kg discus specification was added to the rules book. The steeplechase depth is being changed internationally from 70 cm. allow for an alternative depth of 50 cm in areas that need to conserve water. It was not approved for the US.

Please, make sure to check your tables for changes in weights and measures annually.

Bob Springer reported about weights and measures at the WMA World Meet in Riccione, Italy.

David Katz reported about different aspects of the IAAF World Meet in Osaka, Japan.

There are no Federation Rules changes this year that affected Weights and Measures. One of the guests asked who to contact for constructing a new high school track. Duffy Mahoney was one of the names brought up and the IAAF Track and Field Facilities Manual is a wonderful guide. David Katz said to make sure any track, new or old be checked to see if it is marked correctly.

At the end of the meeting, George handed out a study done by Dan Moy on the effect of the crown of the high jump bar which is cover in an article below.

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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 contention of most vertical jump officials is that the cross bar should be placed with the maximum sag downward since this is the most stable configuration as discussed last newsletter. Dan Moy of Jacksonville, Il spent some time measuring the difference in order to answer the question-

DOES THE PLACEMENT OF THE CROWN ON THE HIGH JUMP BAR CREATE AN ADVANTAGE OR DISADVANTAGE TO A COMPETITOR?

In the last few years I have noted a disagreement among some very good high jump officials. They cannot agree as to the placement of the crown (sag) of the bar when placed upon the platforms. Some officials will place the crown upward, which allows for a very level bar and looks good to the jumpers. Other officials place the bar with the crown (sag) down, and then go through the process of measuring the bar height at a series of locations, insuring that the bar is as level as possible.

The USATF and N.C.A.A. rule books do not address this issue. The rules do state the following:

USATF rule 181.11- The crossbar shall have no bias and, when in place, shall sag a maximum of 2 cm for the high jump.

N.C.A.A. rule 2.5.6 – The crossbar shall be 4.00 (+/- 0.02) meters in length, shall have a maximum weight of 2 Kg, shall show no bias, and when in place, shall sag a maximum of 2 cm.

Being a retired high school science teacher and high school track and field coach, I took the crown placement question as a challenge. I wanted to come up with some very specific data that would help answer this question, so that an agreement could be reached as to the placement of the crown. As the enclosed procedure will show I developed a series of tests using a legal crossbar, high jump standards, and metric measuring equipment to determine the enclosed results.

Some questions had to be answered before I started the testing. Where should the rope be attached to the crossbar? The very center, the extreme ends, or some other location?

I decided that a location 1.0 meter on each side of the center of the bar might be the most un-biased position. At what angle should I apply the force to dislodge the bar?

After conferring with Geo. Kleeman, we agreed that a force horizontal to the ground should produce the best results. After 40 trials, 20 trials with the crown upward and 20 trials with the crown downward, the results were so very consistent, that I determined that more trials would not be needed.

Below is the procedure and results of this simple test.

EQUIPMENT: Fiberglass GILL high jump bar, standards, crossbar, spring scale (grams), rope, measuring tape, protractor, level and hurdles.

PROCEDURE #1: Test with the CROWN DOWNWARD.

Place a certified high jump crossbar (4.0 m, 2.0 Kg),with the crossbars rubber ends removed, between hurdles to determine the crown of the bar, making sure that the bar does not have a crown of more than the 2cm(20mm). If the bar has sag of more than 2cm (20mm) it should not be used for the test since such bar should not be used during competition. Mark the interior end of the bar designating the crown side for placement on the standard during the testing process.

Place the crossbar ends on the bar so that the flat side is downward when the crown is positioned downward. Measure at least three (3) points on the crossbar, from the ground, making sure that the bar is level. An 8 meter lightweight rope is attached to the crossbar, 1.0 meter on each side of the center of the crossbar, and a spring scale is hooked on to the rope, 4.0 meters from where the rope is attached to the crossbar forming a triangle with the crossbar.

The crossbar is placed on the standard platform at a height of 1 meter, making sure that each end is 10 mm (1 cm) from the standard upright. The front edge of the crossbar is also positioned even with the front face of the standard platform. A1 meter high hurdle is placed about 2 meters from the bar so that the spring scale is pulled, with a steady force, even with the top of the hurdle until the crossbar is dislodged from the standard platform. The amount of force is noted when the bar is dislodged from the platform. This procedure will be conducted in a series of trials to determine an average amount of force to be applied to dislodge the bar while the crown of the bar is located downward.

PROCEDURE #2. Test with the CROWN UPWARD.

The crossbar ends will now be rotated 180 degrees so that the crown of the crossbar can be positioned upward on the standard platforms. The height of the crossbar shall be measured to determine that the horizontal forces, as determined by the height of the high hurdle, will be the same as in PROCEDURE # 1. In this case with the crown upward the bar will be higher in the center and will require the spring scale to be raised that specific height above the hurdle while conducting the trials. Again, measure the crossbar position in three different heights to ensure that the bar is level. The rope is attached in the same position as in PROCEDURE #1 as is the spring scale. A series of trials are conducted to determine an average amount of force that need to be applied to dislodge the bar while the crown of the bar is located upward.

THE RESULTS ARE AS FOLLOWED.

CROWN DOWNWARD

Crossbar weight 2,000 g (2.0 Kg)
Height of Bar at

Left Side	Center	Right Side
102 cm	100 cm	102 cm

AVERAGE FORCE (to dislodge the bar)
900 grams +/-20 grams
(20 trials)

CROWN UPWARD

Crossbar weight 2,000 g (2.0 Kg)
Height of Bar at

Left side Center Right side
100 cm 100 cm 100cm

AVERAGE FORCE (to dislodge the bar)
700 grams +/20grams
(20 trials)

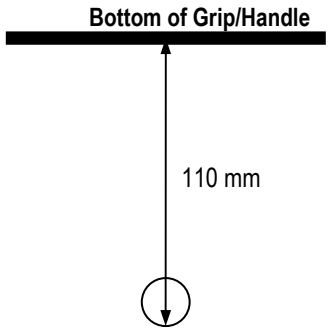
As the data shows, when the crown of the crossbar is placed DOWNWARD and there is a 2 cm sag in the bar, the average amount of force to dislodge the bar is 900 grams. When the crossbar is placed with the crown UPWARD the average amount of force to dislodge the crossbar is 700 grams.

The data shows that it requires about 200 grams (0.44 lbs) more force needed to dislodge the bar when the crown is DOWNWARD than when the crown is UPWARD. So for those high jumpers that just brush the bar, they might have a greater chance of staying in position if the crown of the bar is placed down instead of upward. Maybe the authors of the high jump rules for USATF and the N.C.A.A. knew that the elasticity of a cross bar could come into question and have used the 2.0 cm maximum sag as a guideline.

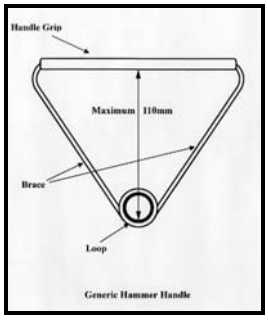
Hopefully, there can be a common agreement as to the placement of the crossbar in the high jump among the officials, so that all high jumpers, no matter the area of the country will be jumping under the same conditions.

NOTE: The POLE VAULT crossbar is placed with the crown (sag) downward. With a maximum of 3 cm sag allowed, it is very difficult to place the crown upward. The pole vault crossbar is longer and heavier so most officials place the crown downward during the competition.

There have been some changes in the interpretation of new hammer handle rules since the last newsletter. The editor had input from both Bob Podkaminer and Imre Matrahazi of IAAF. What is for sure is that if a handle is distorted or can be distorted to make the hammer longer then it is probably an illegal handle. Safety should always be a major part of the review. Rather than specifying a specific configuration for the handle, now length is the major emphasis point. It may not exceed 110 mm from the inside of the grip to the inside of the connection loop. Anything less is fine.



The sides of the handle should be such that they can't be easily bent to increase the length. The same picture will appear in the NCAA, USATF and IAAF rulebooks this year. The intent is to be consistent. The grip can be slightly curved and the sides can be slightly curved as shown below otherwise there is no restriction on the construction other than the bending strength and the breaking strength for IAAF/USATF and the width of grip of 130mm for the NCAA at least for this year. The handle can be any shape as long as it meets the length requirement and the additional width requirement for the NCAA.



Note: Other designs complying with the specifications are acceptable.

APPROVED RULE CHANGES AFFECTING US

This was a Rules Change year for the IAAF. The rule changes for NCAA and the NFHS have been available on the officials' website since mid July at www.usatfofficials.com under Rules. The most significant NFHS change is that leaving the ground in the pole vault is no longer a foul and conformance to the legal top board length for the shot. There are several NCAA changes that affect facilities but most are not related to officials. The NCAA made it clear that the hammer handle will conform to the 110mm length used internationally this year and will include the same diagram although they retain the 130 mm width restriction. The other change is for **Pole Vault Aid.** Amend the second paragraph of Rule 6-6.4 (page 96) as follows: The vaulting pole ((~~shall have no assisting device other than two layers of adhesive tape applied with uniform thickness above the bottom of the hand hold~~)) may have protective layers of tape at the grip end and at the bottom end of the pole. Thus only the High School book restricts the layers of tape on a pole. There are several USATF rule corrections that affect implement officials, mainly for masters implements (see changes on website for Rules 188.4, 189.2, 191.9, and 193.7).

EQUIPMENT CORNER

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

Along with the testing of high jump bars I received information on some improvements for pole vault lifters. The first came from Bob Springer of the Pacific Northwest and the other I solicited by Ted Waldo of the Southern California Association. Bob wrote: We take some of the smaller spring clamps, clamp them into the end of a cross bar and use that to lift up the bar. I have enclosed a picture of the small spring clamp. The rubber ends of the clamp help hold onto the cross bar so it is less likely to slip off and they are just the right size to hold the bar. With the strength of the clamp, they are not likely to come out of the cross bar we are using for the lifter. There are usually extra cross bars and the clamps are only about $2 each.  Ted reports he does the following: I use 18' painter poles with 5" spring clips with clips that are clipped on the end of the pole and taped onto them with tape using wooden tongue depressors used as stiffeners and holders. They transport in the passenger side of the car between the seat and the door. Ted system has the advantage that his poles can be extended from about 6 ft to 18 ft.

Charles Day reported from the Northeast Conference Indoor Track & Field Championships held on Feb. 9 at the Prince Georges Sports and Learning Complex in Landover, Maryland that " I used the nail polish to hold the screws and all held. Central Connecticut State was concerned because theirs is "always" comes apart. I told them that I had put nail polish on the screw to help hold it. They asked me if it worked. I told them that this is the first time that I had tried it. It worked fine and I checked the weight at the end of competition and it was still tight." He had good luck with 48 of implements passing. He had one light 4KG shot. The week before he had 39 of 40 pass with one light women's weight.

I also had an interesting question from Italy about what spacing should be used for the 200m hurdles. There are actually several intervals used. There is the original one used for the old 220 yard hurdles on the straightaway had 20 yards to first hurdle, 9-20 yards between hurdles and 20 yards to finish. This translates for the 200m hurdles for men and boys straightaway had 20 yards to first hurdle, 9-20 yards between hurdles and 20 yards to finish. This translates for the 200m hurdles for men and boy to either 18.25, 9-18.30, 17.05 m or 18.29, 9-18.29, 17.1 m (this last one is preferred since even increments) and for women 16.0, 9-19.0 and 13.0 m.

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 your local contact name and the Weights & 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 2008

There have been another update of the W&M Handbook (30 pg.) in 2008. The latest version is now available and can be downloaded at no cost from the USATF Officials website at . http://www.usatfofficials.com/training/WMManual2008.pdf.