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Indian Standard

SPECIFICATION FOR BALLS, PUNCHING

1. Scope — Dimensions and other requirements of punching balls except bladders.

2. Material

- 2.1 Case Shall be shoulder portion of split hide leather, free from flay cuts vegetable tanned, semi-chrome tanned or chrome tanned, natural or dyed in any colour as agreed to between the purchaser and the manufacturer. However, at the end of tanning operation and before drying, suitable fungicides shall be incorporated into the leather and these shall be effective and non-toxic. Further the tanned leather shall be substantially fat-liquored and grain finished smooth. The panels of leather used for construction shall be such as will stretch uniformally, so as to avoid the ball losing shape in usage.
- 2.2 Stitching Thread 5-cord waxed flax or hemp thread.
- 2.3 Ball and Socket Joint The socket shall be a malleable iron casting, case hardened, smooth and finished bright. The ball shall be of good quality iron casting, surface hardened.
- 3. Weight and Dimensions The total weight of the ball, complete with bladder, shall not exceed 740 g and shall not be less than 570 g. When finished, the size of the ball shall be approximately greater circumference 865 mm, lesser circumference 840 mm.
- 4. Manufacture The case shall be of a tanned split hide leather cut from the shoulder, with a cup-piece of similar leather, which shall be strongly sewn in conjunction with the panels fitted at the bottom of the ball. A rounded leather handle of 4 to 4.5 mm substance, approximately 265 mm long, shall be firmly stitched to the top of the ball. A covering piece of leather, having a hole in the centre to admit the bladder tube, if any, shall be fitted, and a second covering piece of leather shall be attached to the inside of the cover at the top in such a way as to enable the covering piece to be drawn over bladder and tube when in ball. A waxed fabric lace for securely closing the opening in the case shall be provided. The case shall be strongly sewn throughout with 24 to 28 stitches per decimetre. A piece of good quality sash line, 610 mm in length, shall be supplied with each ball.
- 4.1 Ball and Socket Joint In the socket, the diameter of the seating for the ball shall be 27 mm. Three holes shall be drilled in the flange to clear 4.77 mm and countersunk to take the securing screws. The ball shall have a 6.35 mm hole through the centre for taking the eyepin, and shall be recessed to house the nut securing the eye. The diameter of the ball shall be 30.16 mm. The ball shall be truly spherical, smooth and finished bright. The eye shall be forged from mild steel and secured with a circular nut of mild steel. The nut shall be locked by riveting over the pin. Three 19 mm wood screws [see IS: 451-1961 Specification for wood screws (revised)] shall be supplied with each fitting for fixing the socket.
- 5. Workmanship and Finish The balls shall have a neat finish.
- 6. Marking Each ball shall be clearly and indelibly marked with the manufacturer's name, initials or registered trade-mark.
- 6.1 ISI Certification Marking Details available with the Indian Standard Institution.
- 7. Packing To be packed as required by the purchaser.

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