



Arresting a decline in sport participation.

150,000 adults, at 120 centres around Australia, play indoor cricket, with its popularity spreading internationally. However, until recently, the sport did not have specific standards for the manufacture of bats and balls.

When the sport started, a leather coated tennis ball was developed that improved the weight of the ball and still provided a certain softness. Over time, the cricket centre operators opted for a harder, conventional cricket ball, as they were the preference of cricket purists and also lasted longer.

In the early 1990s it became apparent that indoor cricket in Victoria was losing participants. Women did not like getting hurt by the hard ball and men did not like admitting they were fearful of the hard ball and simply abandoned the sport. With rising injury rates, particularly eye injuries, there was a concern regarding legal liability if a player was seriously injured.

Indoor Sports Victoria Inc. (ISV), the governing body for indoor cricket in Victoria, approached Future Materials' Monash University facility with a request to study the interaction between the bats and balls that are used in indoor cricket. The aim of the study was to examine the rebound and impact properties of indoor cricket balls and bats in order to assist Indoor Sports Victoria in establishing a set of safety standards for the sport.

The study provided the data on which the association was able to determine the standards, which now apply to the manufacture of balls used in ISV competitions. The manufacturers were subsequently provided with the report and the Victorian standards, and each season the association endorses the ball that comes closest to its standards.

The most significant outcome is that ISV managed to reduce player injuries and arrest the fall in participation rates. It is possible that the standards set by ISV will gradually spread to other markets.

The testing procedures

Four separate tests were conducted on a range of cricket balls and bats:

(1) Compression tests (for measuring the stiffness of balls);

(2) Rebound/imprint tests (for determining the pressure during impact of a ball);

(3) Force hammer tests (for measuring impact forces and for assessing the time interval over which a particular force is exerted at impact), and

(4) Bat pendulum tests (for examining the angular response of balls due to bat impact).