THE STORY OF
HOL-HI

Wilson
SPORTS EQUIPMENT
Smack!—the ball flashes off the face of the club and away—up and on it travels, steady and unwavering in flight—straight in the direction in which it was dispatched to drop many yards down the fairway.

And then on the green—a stroke with the putter and that same ball rolls away from the club straight on the line of the putt.

Human skill, luck and precision in the implements of play all enter into the success or failure of the shot—but much of the responsibility rests on that little white ball.

Its performance supports or handicaps the player’s skill and its performance is due almost entirely to its construction.

How then is a golf ball built and why are some balls better than others?

Out of four million golfers in this country many have vague ideas of what a golf ball really is, but surprisingly few of them actually know—and therein lies a story.

It is the story of HOL-HI, the great Wilson thin cover ball, that is making golf history. Its brilliant performances in every phase of the game have made it the choice of champions and created an enthusiastic acceptance among golfers everywhere that has heretofore been unknown.

HOL-HI didn’t just happen. It is the result of constant research and laboratory study accomplished at tremendous cost. HOL-HI is built with the exacting care of a high precision instrument and is tested and checked through every one of its seventy-four operations. Its manufacture requires the skilled services of a corps of specially trained chemists and engineers in the laboratories and an army of highly skilled technicians in the shops.

From raw materials to finished product two weeks’ time is required to build one HOL-HI golf ball and here’s how it’s done.

**THE STORY OF HOL-HI**

**Wilson**

**SPORTS EQUIPMENT**

**BUILT ON THE FINEST TRADITIONS OF SPORT**

Wilson high quality and fine workmanship have developed a line of sports equipment which has become a standard for comparison. There is Wilson Equipment for golf, tennis, baseball, basketball, football, boxing, volley ball, soccer, swimming and track and gymnastics.

**WILSON-WESTERN SPORTING GOODS CO.**

**CHICAGO—NEW YORK AND ALL LEADING CITIES**

**A DIVISION OF GENERAL SPORTS INC.**
The center of HOL-HI, on which the core is wound, is a hollow rubber ball 1 1/2 inches in diameter filled with a special liquid composition and then frozen solid under a temperature of 109 degrees below zero. After covering this icy particle with a composition red felt cover which seals the liquid in the center and provides purchase for the rubber tape, the center is ready for winding.

HOL-HI is wound with approximately eight hundred feet of tensioned Para rubber tape and thread stretched ten times its length at the rate of one half every five minutes elapsed time on winding machines that make 1200 revolutions per minute.

Only absolutely pure Para rubber tape and thread is used. It is made from Para rubber imported from British Malaya and the Dutch East Indies. The manufacture of this rubber tape and thread is an industry in itself that we will not mention here. Suffice it to say that the crude rubber is aged from six to eight months and then is washed seven times in a long arduous process before the actual manufacturing of the thread is begun.

Each HOL-HI is given two separate windings. The first is of 1/2 inch rubber tape—after which the center is slowly thawed out for 24 hours—and then the

Illustrating the red felt covered liquid filled rubber center which is frozen at 109 degrees below zero before winding.
second winding, which is of rubber thread, is put on. After each winding the ball is critically tested and checked for absolute sphericity, correct size and proper compression. These compression tests are most interesting and are made through the medium of a specially constructed electrically operated machine which subjects the wound center to a pressure of 150 pounds per square inch. Each point indicated on the machine gauge is equivalent to a distortion of \( \frac{3}{4} \) of an inch and each HOL-III must register 0 or minus 0, indicating no distortion.

It is the winding that the distance qualities of the ball are determined. HOL-III is built with a greater yardage of rubber thread wound at a greater tension, which is magnetically controlled. This results in the amazing distance for which HOL-III is famous.

It is winding, too, that determines the accuracy of the ball. The scientifically accurate machines on which HOL-III is wound prevent any possibility of the shifting of the liquid center. The center remains geometrically true and the winding is absolutely uniform throughout. It is this precision winding that assures perfect balance and explains why HOL-III does not duck or wobble in flight, but is steady and true and holds to the line.

From the winding room the wound cores are moved into the moulding room where the covers are applied. It is the cover that determines the long life of the ball. HOL-III is built for greater playability, yet the covers are only one-third the thickness of ordinary golf ball covers. This feature permits the winding of additional rubber thread on the core and reduces the insulation created by the cover between the club head and the wound core. It permits more of the force of the blow to get into the core for greater distance.

HOL-III covers are made from balata, which is the gum of the South American grown Bullet tree. It is one of the toughest substances obtainable from all the known gum trees.
THE COVER

Now balata as received in the Wilson plant is brown red or dark grey in color and must be refined through an extensive process to remove all foreign substances. The refining of balata cover stock is a most important operation and must be done without injury to the fibre and the strength of the virgin balata. This is accomplished through an exclusive Wilson process that yields from 39 to 37 per cent snow white pure balata for cover stock as tough as it is possible to make.

The refined balata, after being properly milled, is moulded into sheets and cut into strips from which the covers are made. Strips of this balata cover stock are then moulded into cups on hydraulic presses to form the two halves of the cover.

MOULDING THE COVER

"Watch me—I'll hit this so hard I'll knock the cover off." Frequently you have heard this remark on the tee as some strapping golfer prepared to drive. But he won't do it if he is playing H0L-III because H0L-III covers are put on to stay.

The wound centers are covered with the two moulded halves of the cover and then placed in steel moulds engraved with the mesh or dimple indentations and other markings that appear on the ball. The filled moulds are subjected to a pressure of 2000 pounds per square inch at a terrific temperature. This is what makes the rubber soft and pliable. The ball is then turned off and ice water is pumped through the moulds to cool the ball.

An overflow of cover stock around the equator of the ball, technically referred to as the flash, is removed with a knife or by buffing, and the ball is inspected and passed on to the paint room.
PAINTING

We now enter the last phase of the manufacture of HOL-HI—painting—it is a long process and an important one.

The first step is in the cleaning of the moulded ball—to remove all perspiration, grease, dirt or other foreign substance from the surface of the ball. This is done by putting the ball through an acetone bath.

The actual painting is done with a spray and begins with a coat of white primer which is allowed to dry for two hours before the first coat of heavy white enamel is sprayed on the ball. This painting is done very rapidly. One operator on an automatic machine averages 12000 balls in an eight-hour day. Four successive coats of enamel are applied by the spray method to each ball and twenty-four hours elapse between each coat. During these twenty-four hour periods, the balls are dried in a scientifically air conditioned cabinet in which heat, circulation of air and humidity are automatically controlled.

Painting is done by the spray method. Each ball is given four coats.

FINISHING

Once more the balls are rigidly inspected before being passed on to the finisher who fills in the name, number and other marking on the ball by hand with colored paint before passing it on to the packers.

Packaging constitutes the final step. Each packer is an inspector and rigidly inspects each ball for flawless appearance before it is put in the famous blue HOL-HI box.

That is the story of HOL-HI—74 operations—two weeks’ time—hundreds of skilled workers and tremendously expensive equipment for one 75 cent golf ball. But play HOL-HI on your next round and you’ll know why others say HOL-HI must be a better ball.

You can purchase HOL-HI from the professional at your club or from your sporting goods dealer.

The finished HOL-HI and the famous blue HOL-HI box.
BY THIS MARK YOU WILL KNOW FINE GOLF EQUIPMENT