Slap-shot strategy

Plastic makes perfect

A new technology in the manufacture of hockey sticks is not only revolutionizing the industry but will stimulate game action as well.

With a crack heard over the noise in the arena, Number 12's stick slaps the puck toward the goal. As the puck drives into the net, the scoring team lift their sticks in a victory salute — hockey sticks probably made in Canada but likely fabricated of foreign woods. What has happened to the hockey stick industry in recent years and why are so many hockey sticks now made of imported woods?

The problem appears to lie with the priorities of Canada's wood manufacturers. These industries put the emphasis of their research and marketing on materials needed by the construction and furniture industries, at the expense of the specialty woods required by hockey stick manufacturers. Hence, such woods tend to be imported, particularly from Finland which has become the chief source of high quality plywood in Canada. This trend threatens to dominate not only the specialty wood industry, but the hockey stick industry as well.

In an effort to combat this competition, Canadian Hockey Industries Inc., of Drummondville, Québec, has responded with innovative technology in stick fabrication. Founded in 1969, the firm began the manufacture of traditional wood sticks, trying to compete with less than prime quality wood for the junior models. While the basic new construction design was sound, breakage and glue failure caused a high sales figure to be matched by a high complaint rate.

Knowing his new company would not survive under such conditions, Marc Ruel decided to approach the problems from a fresh perspective and sought the assistance of NRC's Industrial Research Assistance Program. A small team that included plastics researcher Léo Tessier, who had the glimmer of an idea about wood and plastic, and Marcel Goupil, a 20-year man in the fibreglass-resin reinforced materials field, began a happy liaison that continued for almost three years.

Léo Tessier is not a white-coat researcher. He seems most content with his fingers sticky with plastics and fiberglass threads in his hair. With the ink barely dry on the IRAP agreement, he began to challenge both the domestic and international hockey stick industry.

The team's first task was to strengthen the heel of the stick, an area often under strain, by adding a plastic part. To anticipate problems resulting from the addition of this new piece, he learned much about the marriage of wood and glass. Domestic quarrels between wood, plastic, glue and epoxy had to be resolved. A three-month effort brought the experiments

A fully automated fibreglass tape winder, designed by Canadian Hockey Industries Inc.

L'enrouleuse automatique mise au point par Les Industries du Hockey Canadien Inc.

Canadian Hockey Industries Inc./Les industries du Hockey Canadien Inc.