

1. Several people with foundry experience have virtually predicted the appearance of the piece on being told only a few details. One even stated that there would probably be a piece of pipe or rod in the middle.
2. There are several steel foundries on the banks of the St. Lawrence River and its tributaries, some of which advertise manganese steels among their products.
3. Furnace and ladle residues and "skulls" are usually sold by foundries since the cost of analysing and remelting them is greater than the value of the metal. The skulls usually go to a steel works where the impurities and many of the alloying elements, such as chromium or manganese, can be removed if required. At one location, on the Richelieu River, skulls have been dumped along the shoreline to reduce erosion. It has been found that, during the winter, the ice picks some of them up and a few have been carried downstream as far as the Ile d'Orleans below Quebec City. Further, isolated deposits of ice and snow, usually covered with mud and debris, can be found along the St. Lawrence as late in the year as June which is the month in which the piece was found. In view of this, it does seem possible that the piece could have been carried to Les Ecureuils by ice that melted or was washed away during the three rainy days prior to its discovery.
4. It seems that in previous analyses it was not realized that there were two steels with quite different compositions and this may have led to varying results. One result, quoted by Mrs. C. Halford-Watkins of Aylmer, Quebec, gives a manganese content of 11.3% while the carbon content, 0.16%, is very low for a manganese steel. The hardness quoted for the steel, Rockwell B94, is lower than the values found in this investigation, which may indicate that the steel had been partly decarburized. This is often found at the surface of manganese steel castings. The carbon content of 0.16% is actually closer to that of the magnetic metal. Further, it is difficult to see why a manganese steel with a carbon content as low as 0.16% should harden when sawn as is typical of manganese steels of high carbon content.

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