

Engineering and Technical Associations.

For Measure, 3.

Boston Society of Civil Engineers, Boston, Mass.
 Engineers' Society of Western Pennsylvania, Pittsburg.
 Western Society of Engineers, Chicago, Ill.

Against Measure, 7.

American Society of Mechanical Engineers.
 Association of Railway Master Mechanics.
 Master Car Builders' Association.
 Providence Association of Mechanical Engineers.
 Society of Naval Architects and Marine Engineers.
 American Society of Heating and Ventilating Engineers.
 Society of Engineers of Western New York, Buffalo, N.Y.

To offset this exhibit the metricites have, to the best of my knowledge and belief, no national association representing mechanical manufacturing interests except the American Institute of Electrical Engineers, and they have that by a vote of its board of directors, and not by a vote of its members; and the American Foundrymen's Association, which divides upon the two questions submitted. Of their case and its support it may be said: "Behold, how great a matter a little fire kindleth."

Mr. Merrill says also: "They appear not to see that we are really in the transition period." The assumption that the metric system is already in considerable use in this country is a favorite one of the metricites, but, like their other claims, it will not bear examination. The vote of this great association of manufacturers, numbering at that time 2,800 members, succeeded in disclosing just fifteen members who had used the system to the extent of five per cent. of their product or more, and sixty-six others who had used it in occasional and sporadic cases.

Further comment is, I think, unnecessary, except to say that it is time for the metricites to come down from the cloud of speculation and consult the facts. It is time for them to give up assuming anything on earth to be true, which they would like to have true, and to base their case upon fact, and not fancy.

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AN ACETYLENE EXPLOSION.

The Dominion Government steamer Scout was the scene of a disastrous explosion on the 18th ult., while she was in Kingston harbor. The Scout is a buoy tender and is fitted with an acetylene generator and tanks. The buoys are filled on board the steamer and at the time of the explosion two had been filled and the crew were working on a third. The explosion was so violent as to shatter windows a mile away, while the sound was heard at a distance of thirteen miles. One man, Fred. Mullen, mate, is known to have been instantly killed; two others, Evan Gillard and Capt. Fred. Couillard, are believed to have been blow to pieces, no traces of them save a few shreds of flesh having been found; and Capt. Allison, of Morrisburg, was so badly burned and otherwise injured that he died the next morning. Other members of the crew were slightly injured. Immediately after the explosion, the boat became a mass of flames, the acetylene on board affording fuel which kept the fire raging for an hour in spite of the efforts of the fire department.

At the inquest which was held over the body of Mullen, it was fairly well established that the explosion was due to defective welding in the buoy. J. R. Arnoldi, of Toronto, testified that the metal in the buoys was far from uniform, and he further held that there was frost in the buoys and that this aided in the explosion. Several witnesses were called and examined as to the properties of acetylene, etc., but, unfortunately, the men who could throw most light on the incident are dead. The jury brought in a verdict as follows:

"That the deceased, Frederick Mullen, came to his death through the explosion of a buoy filled with acetylene gas, from the Government steamer Scout. We are of the opinion that the evidence does not definitely show the cause of the explosion.

We are strongly of the opinion that the buoys should be thoroughly inspected each year and subjected to a sufficient pressure test. We would strongly urge that all such buoys should be filled at some place where the safety of the general public would be least imperilled."



Fig. 1.

The Government has appointed a board of enquiry, consisting of Edward Adams, chairman of the board of steamboat Inspectors, Ottawa; John Dods, boiler inspector, Toronto; and J. P. Thompson, boiler inspector, Kingston. The enquiry will be most thorough, and up to time of writing the investigation is not complete. George T. Merwin, agent for the manufacturers of the buoys, testified that a pressure of fifteen atmospheres was put into the buoys, and in his opinion they should be safe under this pressure. No guarantee, however, was ever asked of the manufacturers, but the purchasers were simply told that the buoys had been tested to 300 pounds. Members

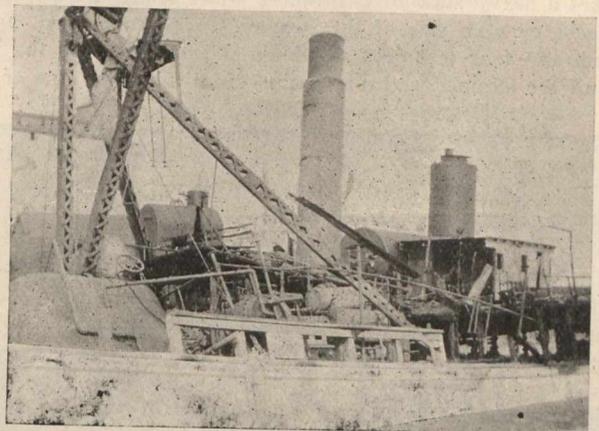


Fig. 2.

of the crew have been examined but no other information was brought out beside what had been given at the inquest. Capt. Fraser, Commissioner of Lights, was examined, and he stated that the buoy had been found structurally weak, and no other reason could be advanced for the explosion.

The general opinion seems to be that the buoy exploded because of defective construction, and the escaping gas was ignited by coming into contact with the fire in the furnace of the boat.

In Fig. 1 will be seen a complete buoy which, although partly charged, did not explode. To the left are shown the bottoms of the two exploded buoys. The one nearest the complete buoy shows three distinct flaws in the welding of the bottom part of the tank. The buoys were made in Germany, and it is stated that no such welding job would have been allowed in Canada, but rivets would be used. The buoys are made of $\frac{3}{4}$ " plate. Their size may be judged by the snubbing post shown on the pier.

Fig. 2 is a view amidships looking down off pier, and it will be seen how cabin, upper structure, and even boiler and engine room were torn up by the explosion. The effects of the fire are also plainly visible.

Fig. 3 shows a general view of the boat after the explosion. The Scout was built in 1897, at Morrisburg, and is employed in handling buoys between Kingston and Quebec. As