220 Madison Avenue
New York, N.Y.

MEN -- AND A MAGIC MINERAL

Chapter 26

J-M And The Merchant Marine

The American steamship "Morro Castle" was proceeding peacefully on its appointed voyage from Havana, Cuba, to New York City when, during September 8, 1934, fire was discovered. Before the liner could be beached at Asbury Park, New Jersey, 318 of the "Morro Castle" passengers and 134 of its crew had been burned to death, drowned or seriously injured.

That holocaust had aroused the whole nation to the necessity of doing something quickly and effectively to avoid another similar marine disaster. The "Morro Castle" tragedy was a challenge especially to Johns-Manville which had been fighting fires by prevention since the burning of the Brooklyn Theatre in 1876 had inspired H. W. Johns to develop asbestos curtains.

For more than half a century the J-M organization had prided itself on systematically preparing itself to meet and overcome the unexpected. J-M's Industrial Department was an excellent example of painstaking intelligent study of the oil industry while unintentionally developing a "know how" which would find it ready to meet a crisis in some other industry. In the current "Morro Castle" case the other industry was the shipping industry as represented by the United States Merchant Marine.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/1

For several years the Power Products and Industrial Department, under Mr. T. K. Mial, Executive Vice-President, had been painstakingly and effectively arming its emissaries with technical information. The theory and practice of this school was to equip a J-M representative with as much knowledge as possible of the various industries in order that when talking about J-M products they would be on a more common ground. Much of this information remained on call in the J-M man's head, but the bulk of it was carefully presented, privately, in "data sheets" designed to give the J-M men the necessary answers.

Early forerunner of the present J-M "data sheet" system was the data presented in "Service to the Oil Industry" published by the Oil Industry Department. This booklet included specifications, description of products and applications to the various pieces of equipment in the Oil Industry.

With that type of background the "Morro Castle" fire, terrible disaster that it was, presented an epochal opportunity to J-M to show what it could do toward developing and furnishing fireproof construction in passenger and cargo vessels. As soon as details of the tragedy had appeared in the newspapers Vice President T. K. Mial called in Evan Rinehart, a Lieutenant Commander in the Naval Reserve, and L. A. Baldwin of the Industrial Department into a conference. Shortly thereafter Mr. Rinehart gathered samples of such products as suggested themselves, including J-M Expanded Transite, Asbestos Flexboard and Asbestos Cloth, appeared downtown to discuss the subject with marine architects

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/2

and executives of ship companies.

As an interesting sidelight on the state of the industry, one prominent shipping line promptly asked Mr. Rinehart to supply it with J-M's entire stock of Expanded Transite to be used as fireproofing under the wood decks of its existing passenger vessels. Even though J-M knew that this was not the ideal material for this purpose this shipping company decided it was good enough for a preliminary installation as at least one form of protection against fires at sea.

A prominent marine architect and chairman of the Marine Committee of the National Fire Protection Association, Mr. George C. Sharp,had been for some time conducting a study of ship fires and had presented several papers at Marine and National Fire Protection Association Meetings. In the natural course of events, Mr. Sharp was interviewed by reporters and had a splendid chance to get full publicity for his ideas.

As a result of this publicity, four days after the "Morro Castle" fire, all the newspapers carried a statement from President Roosevelt advocating fireproof ships and a ban on the old style wooden construction for passenger and crew quarters, as well as public spaces. Just one month later, on October 10, 1934, "Financial World" in its gossip column, "Board Room Brevities," said:

> "General Fireproofing has acquired the metal furniture business of Aluminum Company of America just in time to go after the business of several ocean liners which are throwing

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/3

out most of their wood furnishings.... Along the same line, Johns-Manville is working on a number of asbestos fabrics to supply fireproof rugs, draperies and upholsteries."

Although it investigated the various possibilities in connection with shipping, Johns-Manville did not go into the upholstering business but Mr. Rinehart and his research associates were actively in the marine business just as soon as Sharp's Committee, appointed a little later by President Roosevelt, swung into action and began to make an orderly survey of the situation.

Evan Rinehart kept in close touch with Sharp and took full advantage of all opportunities in the development stage. Commander H. L. Vickery, U. S. Navy, was made Vice-Chairman of Sharp's Committee, and later became Rear Admiral Howard L. Vickery, Assistant to the Chairman of the Maritime Commission.

Sharp's Committee realized that the basic problem of fireproofing a ship was one of confining fires to the areas in which they started rather than attempting to go in for materials like asbestos draperies and upholsteries. This meant building staterooms and cabins of fireproof materials and sectionalizing the ship with still more fireproof bulkheads. To give the Committee a chance to test its ideas, a small steamship, the S. S. Nantasket, was assigned for actual fire tests under simulated operating conditions. All manufacturers with any ideas were requested to submit materials for building sample staterooms. Among these were Johns-Manville, and a number of companies engaged in making sectional metal panels.

In 1938, J-M's first thoughts were towards panels

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/4

constructed of asbestos paper in cellular form, and some material of this type was sold. These cellular panels had the disadvantage of not being vermin and rat-proof and were not adapted to holding screws. Consequently, G. B. Brown of the Research Department, upon the insistence of marine engineers for a solid panel of light weight, developed Marine Sheathing, a cement and asbestos fibre board of 70 lb. density per cubic foot. This met with some acceptance but the marine engineers and shipbuilding companies all felt that it was too heavy.

Design requirements dictated that not over 40 lbs. per cubic foot could be allowed for the weight of the fireproof panels. This caused G. B. Brown to try numerous substitutes for Canadian asbestos fibre in marine sheathing until finally, early in 1936, the problem was solved by using Amosite fibre from South Africa to bring the weight down -- and Marinite was invented. Every authority consulted was enthusiastic about the first laboratory samples weighing about 40 lbs. per cubic foot. Brown went to Nashua and made trial production runs for sample staterooms in the fire test program then well under way on the "S. S. Nantasket."

Both Marinite and Marine Sheathing, as well as other manufacturers' products, were approved in the fire tests which were run throughout 1936 and 1937.

The U. S. Maritime Commission was also established in 1936 and started surveys which resulted in the passage of a bill requiring either automatic sprinklers or fireproof

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/5

construction on every U. S. passenger vessel in service after July 1, 1937. At the same time, the Maritime Commission embarked on its first program of building fifty modern, fast, fireproof vessels per year for ten years. Johns-Manville signed its first contract with a prominent joiner contractor and became established in the marine business. Shortly thereafter, Senator Copeland's bill requiring real fireproof construction on every U. S. vessel put in service after January 1, 1940 was passed. It soon became apparent that, through the efforts of Mr. Rinehart, J-M was going to secure a contract for panels on the new U. S. liner America, the largest passenger vessel ever built in the U. S.

J-M was fortunate in having at its Nashua factory plenty of extra press capacity when Marine Sheathing and Marinite was first produced. By utilizing this extra capacity, the Production Department was able to work out manufacturing problems without having to seek any important extra equipment. By the latter part of 1937, with increases in the sale of Ebony and Flat Transite, press capacity was at a premium and it was necessary to consider additional manufacturing facilities.

By June, 1938, J-M was in better position to estimate possibilities in these new products as the Newport News Shipbuilding Company's order of 420,000 board feet for the America had been secured. Order for fireproofing structural supports in an oil refinery as well as industrial oven business of some magnitude showed up in due time.

Due to crowded conditions at Nashua, in the latter part

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/6

of 1938, 60,000 square feet of Marinite, requiring ten-foot lengths, were pressed at the Manville, New Jersey Plant, and the sheets were then shipped to Nashua for subsequent finishing. Later a large fireproofing order amounting to some 100,000 square feet was also filled at Manville early in 1939. On February 20, 1939, the J-M Officers Board approved expenditures for leasing the Billerica Plant which was shipping Marinite and Marine Sheathing by August 1st.

As was to be expected, Billerica did not reach full operation until the spring of 1940 and full capacity was not needed until the middle of 1941.

With this new plant, production of Marinite and Marine Sheathing became large enough to make it possible to serve many other industrial uses, such as the protection of buss bars, switching equipment and instruments in electrical power plants.

Pearl Harbor came along very quickly and the marine program was so rapidly accelerated that, by government direction, J-M had to drop all other industrial uses than marine panels until after the war. The Billerica Plant was operated on an overtime basis long after V-days arrived because officers' and crews' quarters on nearly all the fireproof cargo boats built in the Government-expanded marine program used J-M materials. Not until 1944 did J-M get back into other industrial fields.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25554/7