

PLAINTIFF'S  
EXHIBIT

WB-970

# Johns-Manville Materials for Marine Service

*Selected Data Sheets  
describing J-M Products  
and their application  
in marine service*

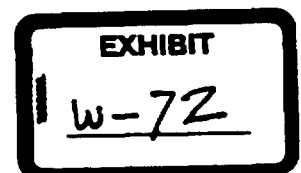
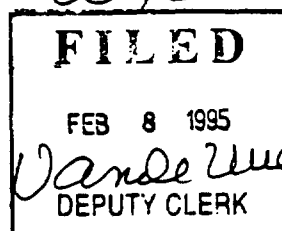


## Johns-Manville

Offices in all Large Cities

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Room Materials." Page numbers indicate location in the J-M information system. Lack of consecutive numbers does not imply missing pages—sheets are listed in order of sequence.

### Joiner Materials and Structural Insulations

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#### Boiler and Engine Room Specifications:

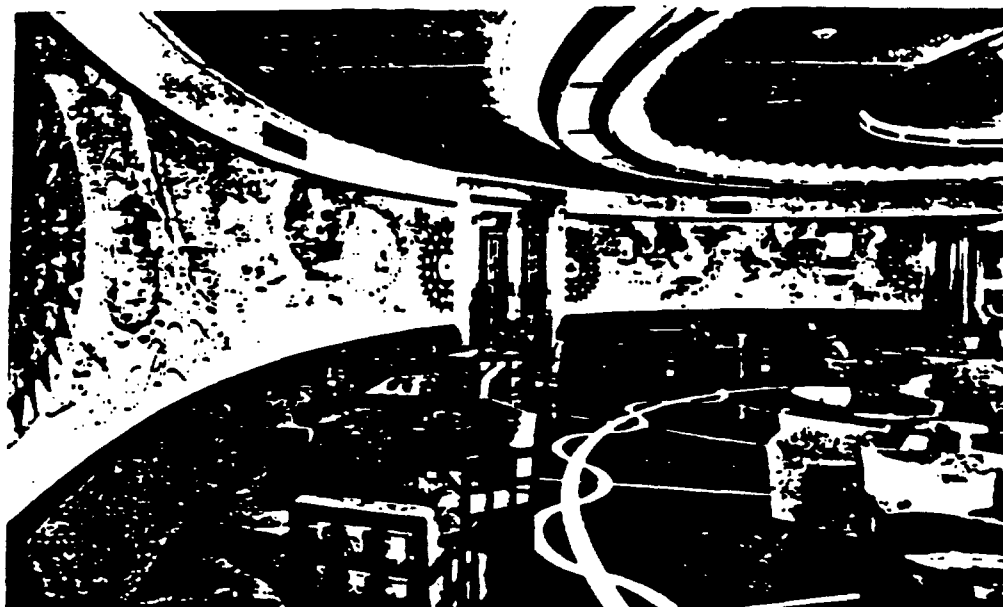
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Contents of this book are arranged in the same order as the sheets are listed

## J-M Marine Joiner Materials and Structural Insulations



*Smoking room cabin class. This decorative skin is formed by J-M Marine Veneer bent to curvature on the job and covered with a distinctive map mural. Ceiling consists of J-M Marine Sheathing.*

### General

Ships of modern design must embody joiner work which is fireproof, attractive and durable. The government requires that the materials be incombustible. For decorative purposes a diversity of fine finishes are essential; and passengers and crew both demand comfort and a reasonable freedom from irritating noisiness.

To meet these conditions and to fulfill structural requirements, the shipyard and joiner contractor must use joiner materials combining ample strength with minimum weight, immunity to vermin and mold, resistance to moisture, and with sufficient resistance to passage of sound. Collateral factors are ease of working and installing, satisfactory screw-holding power and susceptibility to a wide variety of finishes—features peculiar to the solid type of panel.

Structural insulations must fulfill the essential requirements of light weight combined with high insulating value, fire and moisture resistance, immunity to mold, economical installation and possess a high capacity for sound absorption.

### Joiner Materials

**Marinite:** A light-weight, fire-resistant, homogeneous sheet material of high insulating value, made of asbestos fibre with an inorganic binder. It is used for divisional bulkheads and is supplied in the following factory-applied finishes: (a) Standard Base consisting of a baked-on linseed oil treatment and glazed ready for the application of the priming coat. (b) Marine Veneer, on one or both sides, where a particularly hard surface is desired. (c) Plain, with the surfaces sanded for subsequent facings or veneers of wood, galvanized steel, or other veneers. Decorative treatments such as linoleum, linen and wallpaper can be applied to Marinite after it is erected.

Combinations of these finishes are frequently used, such as wood veneer on one (room) side and Marine Veneer on the passageway side. Galvanized steel facings, usually 26 ga., are commonly used where great strength and resistance to abrasion is desired. They are suitable for fine decorative painting, as is the Marinite with the Standard Base Finish.

Marinite is supplied in the following sizes or in sheets cut from these to desired size. Cut sheets involve charges for cutting and waste; intermediate thicknesses are charged at the price of the next higher standard thickness.

Sizes: 36" x 96", 42" x 96" and 48" x 96" standard sizes. 48" x 120" special order.

Thicknesses:  $\frac{1}{8}$ ",  $\frac{3}{16}$ ",  $\frac{1}{2}$ " and 1".

Tolerances: In length and width,  $\pm \frac{1}{4}$ "; thickness,  $\pm \frac{1}{16}$ "; for Marine Veneer Finish on both sides,  $\pm \frac{1}{16}$ "; weight,  $\pm 10$  percent; sheets may be ordered "untrimmed" to give oversize up to 1" in width and  $1\frac{1}{2}$ " in length.

Weights: The average weights of sheets, according to type of finish, are given below, in lb. per sq. ft.

| Marinite               |                           |                                  | Marinite Faced as Below         |                           |                                 |                                 |                               |
|------------------------|---------------------------|----------------------------------|---------------------------------|---------------------------|---------------------------------|---------------------------------|-------------------------------|
| Thick-<br>ness,<br>in. | Plain<br>Finish<br>Weight | Std.<br>Base<br>Finish<br>Weight | Total<br>Thick-<br>ness,<br>in. | Plain<br>Finish<br>Weight | 1/8" Marine<br>Veneer<br>Weight | 1/2" Marine<br>Veneer<br>Weight | Std. Base<br>Finish<br>Weight |
| $\frac{1}{8}$          | 1.55                      | 1.80                             | $\frac{1}{8}$                   | 1.59                      | 2.11                            | 2.53                            | 3.35                          |
| $\frac{3}{16}$         | 2.32                      | 2.57                             | $\frac{3}{16}$                  | 2.41                      | 2.93                            | 3.35                            | 4.12                          |
| $\frac{1}{2}$          | 2.71                      | 2.95                             | $\frac{1}{2}$                   | 2.92                      | 3.34                            | 3.76                            | 4.51                          |
| 1                      | 3.10                      | 3.34                             | 1                               | 3.22                      | 3.74                            | 4.16                            | 4.90                          |

For "Furnish Basement" or "Furnish Ceiling" on both sides add 0.41 lb. per sq. ft. to weights of plain Marinite. For concrete formwork, add 15 percent to weights above.

\* Overall thickness of panel includes facing as shown.

Note: Veneering both sides with metal, wood or Marine Veneer substantially increases the panel strength and stiffness.

**Marine Sheathing:** Similar in appearance and composition to Marinite but heavier and stronger. It is used for linings and ceilings; also for shelving in closets. The material is supplied in the standard-size sheets listed below or in sheets cut from these. The finishes available are the same as those provided for Marinite.

Sizes: 36" x 96", 42" x 96" and 48" x 96" standard sizes. 48" x 120" special order.

Tolerances: Same as for Marinite.

Thicknesses:  $\frac{1}{8}$ " to 1" as shown under "Weights."

Weights: The average weights in lb. per sq. ft. of various thicknesses of Marine Sheathing, Standard Base Finish, are:

Thicknesses,  $\frac{1}{8}$ ",  $\frac{3}{16}$ ",  $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1"

Weight, 2.39 3.14 4.64 5.39 6.15

**Marine Veneer:** A strong, flexible material in relatively thin sheets made of asbestos fibre and cement. It may be painted, waxed and polished or perforated for acoustical purposes (See Marine Acoustical Materials).

Sizes: In sheets 48" x 96".

Thicknesses:  $\frac{1}{8}$ ",  $\frac{3}{16}$ ", and  $\frac{1}{2}$ " for special use as a factory-applied veneer over Marinite and Marine Sheathing.

Tolerances: In length and width  $\pm \frac{1}{4}$ "; thickness,  $\pm \frac{1}{16}$ ".

Weights: 1.1 lb. and 1.5 lb. per sq. ft. for  $\frac{1}{8}$ " and  $\frac{3}{16}$ " thicknesses, respectively.

**Marine Furring, Grounds or Insulating Gaskets:** Strips or short blocks for insulating the structural steel from the sheathing or ceiling. They are usually cut from Marine Sheathing (Marinite if specified)



Cabin finish of wood-veneered Marinite bulkheads with painted J-M Marine Sheathing ceiling

at the factory. Virtually any size is available within the maximum dimensions, such as  $\frac{1}{2}$ " x 2", 1" x 2",  $1\frac{1}{2}$ " x 3", 2" x 4", up to 2" x 10", and any length up to 8 ft.

**Marine Battens:** Thin strips cut from Marine Sheathing or Marine Veneer in widths from 2" to 10" inclusive, and lengths up to 8 ft. The usual thicknesses are  $\frac{3}{8}$ " or  $\frac{1}{2}$ " for Marine Sheathing and  $\frac{3}{16}$ " only for Marine Veneer. The sheathing is furnished with edges square or beveled and the Standard Base Finish for painting.

**Cutting, Working and Painting:** The following details are general in scope. Complete directions appear on separate data sheets.

The joinder materials may be cut with a carpenter's saw or a light-weight electric saw. However, for jobs involving any quantity of materials it is customary to use abrasive disc saws or, for metal-faced sheets, a steel-cutting hand saw. Drilling is usually done by steel-working drills.

For painting, the Standard Base Finish of Marinite or Marine Sheathing is primed and painted in the usual manner. For Marine Veneer, a chlorinated rubber enamel should be used or (alternate) the surface primed with boiled linseed oil for subsequent painting with lead and oil paints.

**Erection:** Following drawings illustrate the various erection methods. While some of the methods shown have been used to a less degree than others, all offer easy adaptability.