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Legacy report on the 1997 *Uniform Building Code*™

DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07180—Traffic Coatings

LIFE DECK AL WALKING DECK SYSTEM

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1.0 SUBJECT

Life Deck AL Walking Deck System.

2.0 DESCRIPTION

2.1 General:

Life Deck AL is a cementitious walking deck and roof covering system consisting of metal lath, base coat, slurry coat and top coat applied over a plywood deck. When installed in accordance with this report, the system has a Class A roof classification.

2.2 Materials:

2.2.1 Substrate: The substrate is minimum exterior grade, $^5/_8$-inch-thick (15.9 mm) plywood complying with UBC Standard 23-2. Plywood shall have tongue-and-groove edges or shall have all edges blocked.

2.2.2 Metal Lath: Life Deck AL Lath is a diamond-mesh, expanded metal lath weighing 2.5 pounds per square yard (0.95 kg/m^2) and manufactured using hot-dipped galvanized steel.

2.2.3 LD-1 AL Cement: LD-1 AL Cement is a dry blend mixture of portland cement and silica sand, and product is packaged in 50-pound (22.5 kg) bags. Shelf life is one year when stored in dry conditions.

2.2.4 LD-81 AL Acrylic: LD-81 AL Acrylic is a liquid admixture to be used with Life Deck LD-1 AL cement, and is packaged in 5-gallon (18.9 L) containers. Shelf life is one year when stored at temperatures between 40˚F and 100˚F (4.4˚C and 37.8˚C) in a dry place.

2.2.5 Top Coat: AL Top Coat "10" Series is a proprietary, water-based liquid sealant used as the top coat of the Life Deck AL system, and is packaged in 1-quart to 5-gallon (946.4 mL to 18.9 L) pails. Shelf life is five years when stored at temperatures between 40˚F and 110˚F (4.4˚C and 43.3˚C).

2.3 Preparation of Substrate:

Plywood substrate must be structurally sound, clean, dry and free of oil, grease, paint and dust. The plywood substrate must be supported by framing with a maximum spacing of 16 inches (406 mm). The substrate must be sloped for proper drainage, with a slope of $^1/_4$ unit vertical in 12 units horizontal (2% slope).

2.4 Installation:

2.4.1 General: The walking deck materials shall be applied when the ambient temperature is 55˚F (13˚C) or higher and the weather is dry. The minimum total thickness of the base, slurry and finish coats is 0.211 inch (5.4 mm).

2.4.2 Metal Lath: The Life Deck AL metal lath shall be installed with lath edges parallel to plywood substrate joints, and offset from the substrate joints by 2 inches (51 mm). The lath shall be held back $^1/_2$ inch (12.7 mm) from all deck edges. The lath shall be stapled to the plywood substrate with 16 staples per square foot (172 staples/m^2). The staples shall be $^5/_8$ inch (15.9 mm) long, and shall be corrosion resistant and No. 16 gage, with a $^7/_8$-inch (22 mm) to 1-inch (25.4 mm) crown. The lath shall be lapped 1 to 2 inches (25 to 51 mm) at seams.

2.4.3 Base Coat: The base coat mixture consists of one 50-pound (22.5 kg) bag of Life Deck LD-1 AL cement combined with 1$^1/_4$ gallons (4.73 L) of Life Deck LD-81 AL acrylic and up to one quart (946.4 mL) of water, mixed until uniform consistency is achieved. This mixture results in approximately a 4.5-gallon (17 L) batch. The base coat mixture shall be poured onto the lath at a rate of 40 square feet (3.68 m^2) per batch. The minimum dry thickness of the base coat shall be 0.142 inch (3.6 mm). Prior to application of the slurry coat, the base coat shall be smoothed with a trowel and allowed to cure until firm.

2.4.4 Slurry Coat: The slurry coat is identical to the base coat except the slurry coat is applied at a rate of 100 to 150 square feet (9.2 to 13.8 m^2) per 4.5-gallon (17 L) batch, to result in a minimum dry thickness of the slurry coat of 0.063 inch (1.6 mm). Prior to application of the top coat, the slurry coat shall be smoothed with a trowel and allowed to cure until firm.

2.4.5 Finish Coat: The Life Deck AL Top Coat "10" Series is used as the finish coat and shall be applied with a roller, in two applications, for a total coverage rate of 125 square feet per gallon (3.04 m^2/L).

2.5 One-hour Fire-resistive Construction:

The Life Deck AL walking deck system when installed in accordance with this report over $^5/_8$-inch-thick (15.9 mm) CDX plywood with blocked joints, and supported by 2-inch-by-10-inch (51 mm by 254 mm) joists spaced 16 inches (406 mm)

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on center, may be substituted for the double wood floor for one-hour fire-resistive construction, described in Footnote 13 of Table 7-C of the 1997 *Uniform Building Code*™. When 2-inch-by-8-inch (51 mm by 203 mm) joists spaced 16 inches (406 mm) on center are used to support the floor, the bending design stress for the joists shall be limited to 78 percent of the code-prescribed values.

2.6 Method of Repair:

The damaged materials must be removed by grinding (to the substrate), and the walking deck system replaced in accordance with Section 2.4. Damage to substrate during removal of walking deck system will require replacement of the substrate.

2.7 Identification:

Each container or package of material is labeled with the name and address of Life Paint Company, the product designation, the lot or batch number, the evaluation report number (ER-5416) and the name of the inspection agency (Ramtech Laboratories, Inc.).

3.0 EVIDENCE SUBMITTED

Data in accordance with the Acceptance Criteria for Walking Decks (AC39), dated March 2000, and a quality control manual.

4.0 FINDINGS

That the Life Deck AL walking deck system described in this report complies with the 1997 *Uniform Building Code*™, subject to the following conditions:

4.1 The system is installed in accordance with this report and the manufacturer's instructions, by applicators approved by Life Paint Company.

4.2 The system is limited to application in locations having a maximum basic wind speed of 80 miles per hour (129 km/h) on structures a maximum of 40 feet (12 192 mm) in height, in Exposure B areas.

4.3 The products are manufactured at the Life Paint Company facility in Santa Fe Springs, California, under a quality control program with inspections by Ramtech Laboratories, Inc. (AA-655).

This report is subject to re-examination in one year.