

Ind 1000, 20, 21, 44, 49

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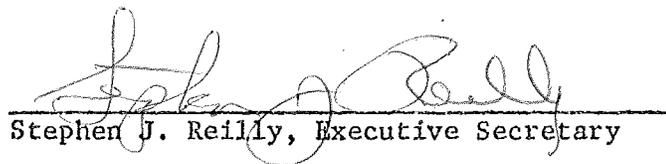
STATE OF WISCONSIN)
) SS
DEPARTMENT OF INDUSTRY,)
LABOR AND HUMAN RELATIONS)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Stephen J. Reilly, Executive Secretary of the Department of Industry, Labor and Human Relations, and custodian of the official records of said Department, do hereby certify that the attached rules to Wisconsin Administrative Code Chapter Ind 1000, Safety and Health, were adopted by the Department of Industry, Labor and Human Relations on July 9, 1974.

I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Capitol, in the City of Madison, this 10th day of July, A.D., 1974


Stephen J. Reilly, Executive Secretary

ORDER OF

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS

Pursuant to authority vested in the Department of Industry, Labor and Human Relations by sections 101.01 to 101.20, Wis. Stats., the Department of Industry, Labor and Human Relations hereby creates and adopts rules of Wisconsin Administrative Code Chapter Ind 1000, Safety and Health.

The rules attached hereto shall become effective on the first day of the month following publication in the Wisconsin Administrative Code as provided in section 227, Wis. Stats.

WISCONSIN ADMINISTRATIVE CODE

Rules of

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS

SAFETY AND HEALTH

Wis. Adm. Code Ind 1000

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS

GEF 1, 201 E. Washington Ave.
Madison, Wisconsin 53702

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Chapter Ind 1000, Safety and Health, is created to read:

CHAPTER IND 1000

SAFETY AND HEALTH

Ind 1000.01 PURPOSE. The purpose of this code is to establish administrative rules which promote the health, safety and welfare of the public, employers and employes and to provide for safe and healthful places of employment.

Ind 1000.02 SCOPE.

- (1) The administrative rules in section Ind 1000.50 of this code shall apply to the public, employers, employes, political subdivisions and places of employment according to the explanation given in this section: The U.S. Department of Labor, Occupational Safety and Health Administration, pursuant to authority granted in sections 6 and 8(g) of the Williams-Steiger Occupational Safety and Health Act of 1970 (84 Stat. 1593, 1600: 29 U.S.C. 655, 657), has established minimum safety and health standards for all employers, employes and places of employment in general industry, construction and maritime employment. On March 1, 1974, the U.S. Secretary of Labor approved the Wisconsin occupational safety and health plan. Under this plan the Wisconsin department of industry, labor and human relations will administer and enforce the administrative rules as set forth in section Ind 1000.50.
- (2) The administrative rules in section 1000.70 of this code are supplementary Wisconsin administrative rules permitted in accordance with chapter 101, Wis. Stats., and with the Wisconsin occupational safety and health plan which provide safety and health standards for the public, employes, employers and places of employment not covered in section Ind 1000.50.

Ind 1000.03 POWERS, DUTIES AND JURISDICTION OF THE DEPARTMENT. The department shall have the power to create reasonable administrative rules, regulate all investigations, conduct hearings, supervise and administer the administrative rules related to the public, employers, employes and places of employment in accordance with section 101.02, Wis. Stats.

Ind 1000.04 WISCONSIN OCCUPATIONAL SAFETY AND HEALTH PLAN. Copies of the Wisconsin occupational safety and health plan are available from the department of industry, labor and human relations at a cost of \$12.00 (narrative only), or \$25.00 (entire plan).

Ind 1000.05 ADOPTION OF STANDARDS.

- (1) Pursuant to section 227.025, Wis. Stats., consent has been granted to incorporate by reference the standards listed in this section for the administrative rules in section 1000.50. The standards incorporated by reference in section Ind 1000.70 are indicated in the individual chapters or supplements.
- (2) Copies of the incorporated standards are on file in the offices of the department, the secretary of state and the revisor of statutes.

Note: The latest date of the standard is the one incorporated by reference in the administrative rules.

(a) ANSI Standards. The following standards may be procured for personal use from American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

1. SAFETY REQUIREMENTS FOR POWDER ACTUATED FASTENING SYSTEMS (Revision of A10.3-1970). ANSI A10.3-1972.
2. SAFETY REQUIREMENTS FOR MATERIAL HOISTS (Partial revision of A10.2-1944). ANSI A10.5-1969.
3. SAFETY REQUIREMENTS FOR CONCRETE CONSTRUCTION AND MASONRY WORK. ANSI A10.9-1970.
4. PRACTICE FOR INDUSTRIAL LIGHTING (IES RP 7-1973) (Revision of A11.1-1965; IES RP 7-1965). ANSI A11.1-1973.
5. SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS. ANSI A12.1-1973.
6. SCHEME FOR IDENTIFICATION OF PIPING SYSTEMS. ANSI A13.1-1956.
7. SAFETY CODE FOR PORTABLE WOOD LADDERS, with supplement A14.1a-1972. ANSI A14.1-1968.
8. SAFETY CODE FOR PORTABLE METAL LADDERS (Revision of A14.2-1956). ANSI A14.2-1972.
9. SAFETY CODE FOR FIXED LADDERS. ANSI A14.3-1956.
10. SAFETY CODE FOR ELEVATORS, DUMBWAITERS, ESCALATORS AND MOVING WALKS, with addenda A17.1a-1972 (Revision of A17.1a-1966, A17.1b-1968, A17.1c-1969 and A17.1d-1970). ANSI A17.1-1971.
11. PRACTICE FOR THE INSPECTION OF ELEVATORS (INSPECTOR'S MANUAL), including addenda A17.2a-1965 and supplement A17.2b-1967 (ANSI A17.2-1960). ANSI A17.2-1973.
12. SAFETY STANDARD FOR MANLIFTS, including supplement A90.1a-1972. ANSI A90.1-1969.
13. MANUALLY PROPELLED MOBILE LADDER STANDS AND SCAFFOLDS (TOWERS). ANSI A92.1-1971.
14. VEHICLE MOUNTED ELEVATING AND ROTATING WORK PLATFORMS. ANSI A92.2-1969.
15. SAFETY CODE FOR POWERED PLATFORMS FOR EXTERIOR BUILDING MAINTENANCE. ANSI A120.1-1970.
16. SAFETY CODE FOR THE USE, CARE AND PROTECTION OF ABRASIVE WHEELS, including supplement B7.1a-1973. ANSI B7.1-1970.
17. SAFETY STANDARD FOR MECHANICAL POWER TRANSMISSION APPARATUS (Revision of B15.1-1953 (R1958). ANSI B15.1-1972.
18. SAFETY STANDARD FOR CONVEYORS AND RELATED EQUIPMENT (Partial revision of B20.1-1957). ANSI B20.1-1972.

19. OVERHEAD AND GANTRY CRANES (Partial revision of B30.2-1943). ANSI B30.2.0-1967.
20. CRAWLER, LOCOMOTIVE AND TRUCK CRANES (Partial revision of B30.2-1943). ANSI B30.5-1968.
21. SAFETY CODE FOR DERRICKS (Partial revision of B30.2-1943). ANSI B30.6-1969.
22. POWER PIPING (Revision of B31.1.0-1967, B31.1.0a-1971, B31.1.0b-1971, B31.1.0c-1972 and B31.1.0d-1972). ANSI B31.1-1973 with Addenda B31.1b and 31.1c-1973.
23. FUEL GAS PIPING. ANSI B31.2-1968.
24. PETROLEUM REFINERY PIPING (Revision of B31.3-1966). ANSI B31.3-1973.
25. REFRIGERATION PIPING, with B31.5a-1968. ANSI B31.5-1966.
26. SAFETY STANDARD FOR POWERED INDUSTRIAL TRUCKS (REQUIREMENTS RELATING TO THE ELEMENTS OF DESIGN, OPERATION AND MAINTENANCE). ANSI B56.1-1969.
27. COMPRESSED GAS CYLINDER VALVE OUTLET AND INLET CONNECTIONS (CGA V-1-1965). ANSI B57.1-1965.
28. SAFETY SPECIFICATIONS FOR POWER LAWN MOWERS, LAWN AND GARDEN TRACTORS AND LAWN TRACTORS (Revision of B71.1-1968). ANSI B71.1-1972.
29. SLOW-MOVING VEHICLE IDENTIFICATION EMBLEM (ASAE S276.2-1968; SAE J943). ANSI B114.1-1971.
30. SPECIFICATIONS FOR WELDED AND SEAMLESS STEEL PIPE (ASTM A53-72). ANSI B125.1-1972.
31. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. ANSI D6.1-1971.
32. PRACTICES FOR RAILROAD HIGHWAY GRADE CROSSING PROTECTION (AAR Bulletin 6-1967). ANSI D8.1-1967.
33. SPECIFICATION FOR STRUCTURAL STEEL (ASTM A36-69). ANSI G41.5-1970.
34. SPECIFICATION FOR SEAMLESS COPPER WATER TUBE (ASTM B88-69). ANSI H23.1-1970.
35. SPECIFICATION FOR ALUMINUM-ALLOY SEAMLESS PIPE AND SEAMLESS EXTRUDED TUBE. (ASTM B241-73) (Revision of H38.7-1969, 2nd ed.; ASTM B241-69). ANSI H38.7-1972.
36. RUBBER INSULATING LINE HOSE (ASTM D1050-59[1965]). ANSI J6.1-1950 (R. 1971).
37. RUBBER INSULATOR HOODS (ASTM D1049-59 [1965]). ANSI J6.2-1950 (R. 1971).
38. RUBBER INSULATING BLANKETS (ASTM D1048-70). ANSI J6.4-1971.
39. RUBBER INSULATING SLEEVES (ASTM D1051-70). ANSI J6.5-1971.

40. SPECIFICATIONS FOR RUBBER INSULATING GLOVES (ASTM D120-70). ANSI J6.6-1971.
41. RUBBER MATTING FOR USE AROUND ELECTRIC APPARATUS (Reaffirmation and redesignation of C59.4-1935) (ASTM D178-24 [1965]). ANSI J6.7-1935(1971).
42. IDENTIFICATION OF AIR-PURIFYING RESPIRATOR CANISTERS AND CARTRIDGES (Revision of K13.1-1967). ANSI K13.1-1973.
43. SAFETY CODE FOR WOODWORKING MACHINERY (Revision of O1.1-1954). ANSI O1.1-1971.
44. MINIMUM REQUIREMENTS FOR SANITATION IN PLACES OF EMPLOYMENT. ANSI Z4.1-1968.
45. SAFETY CODE FOR VENTILATION AND OPERATION OF OPEN-SURFACE TANKS. ANSI Z9.1-1971.
46. FUNDAMENTALS GOVERNING THE DESIGN AND OPERATION OF LOCAL EXHAUST SYSTEMS (Revision of Z9.2-1960). ANSI Z9.2-1971.
47. PREVENTION OF SULFUR FIRES AND EXPLOSIONS (NFPA 655-1971) (Revision of Z12.12-1968; NFPA 655-1968). ANSI Z12.12-1972.
48. CODE FOR THE PREVENTION OF DUST EXPLOSIONS IN WOODWORKING AND WOOD FLOUR MANUFACTURING PLANTS (NFPA 664-1962 [R. 1971]). ANSI Z12.20-1962 (R. 1969).
49. INSTALLATION REQUIREMENTS FOR GAS APPLIANCES AND GAS PIPING (NFPA 54-1964). ANSI Z21.30-1964.
50. METHOD FOR MEASUREMENT OF REAL-EAR ATTENUATION OF EAR PROTECTORS AT THRESHOLD. ANSI Z24.22-1957.
51. INSTALLATION OF BLOWER AND EXHAUST SYSTEMS FOR DUST, STOCK AND VAPOR REMOVAL OR CONVEYING (NFPA 91-1961) (ANSI Z33.1-1961). ANSI Z33.1-1974.
52. SPECIFICATIONS FOR ACCIDENT PREVENTION SIGNS. ANSI Z35.1-1972.
53. SPECIFICATIONS FOR ACCIDENT PREVENTION TAGS. ANSI Z35.2-1968.
54. MEN'S SAFETY-TOE FOOTWEAR. ANSI Z41.1-1967 (R. 1972).
55. METHOD OF MARKING PORTABLE COMPRESSED GAS CONTAINERS TO IDENTIFY THE MATERIAL CONTAINED (CGA C4-1954). ANSI Z48.1-1954 (R. 1971).
56. SAFETY IN WELDING AND CUTTING (Revision of Z49.1-1967). ANSI Z49.1-1973.
57. SAFETY STANDARD FOR NON-MEDICAL X-RAY AND SEALED GAMMA-RAY SOURCES, Part 1, General (NBS H93). ANSI Z54.1-1963.
58. PRACTICE FOR OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION. ANSI Z87.1-1968.
59. PRACTICES FOR RESPIRATORY PROTECTION. ANSI Z88.2-1969.
60. SAFETY REQUIREMENTS FOR INDUSTRIAL HEAD PROTECTION. ANSI Z89.1-1969.
61. SAFETY REQUIREMENTS FOR INDUSTRIAL PROTECTIVE HELMETS FOR ELECTRICAL WORKERS (Class B). ANSI Z89.2-1971.

(b) API Standards. The following standards may be procured for personal use from American Petroleum Institute, 1800 K Street, NW, Washington, D. C. 20006.

1. SPECIFICATION FOR OIL STORAGE TANKS WITH RIVETED SHELLS. 12A, September 1951.
2. SPECIFICATION FOR BOLTED PRODUCTION TANKS. 12B, May 1958 and Supplement 1, March 1962.
3. SPECIFICATION FOR LARGE WELDED PRODUCTION TANKS. 12D, August 1957.
4. SPECIFICATION FOR SMALL WELDED PRODUCTION TANKS. 12F, March 1961.
5. RECOMMENDED RULES FOR THE DESIGN AND CONSTRUCTION OF LARGE, WELDED, LOW-PRESSURE STORAGE TANKS (620, 1966). 620-1970.
6. WELDED STEEL TANKS FOR OIL STORAGE (650, 1966). 650-1970.
7. VENTING ATMOSPHERIC AND LOW PRESSURE STORAGE TANKS. 2000-1968.

(c) ASME Standards. The following standards may be procured for personal use from the American Society of Mechanical Engineers, United Engineering Section, 345 East 47th Street, New York, New York 10017.

1. POWER BOILERS, Section I (1968). 1971.
2. PRESSURE VESSELS, Section VIII (1968). 1971.

(d) ASTM Standards. The following standards may be procured for personal use from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

1. SPECIFICATIONS FOR MALLEABLE IRON CASTINGS. A 47-68.
2. SPECIFICATIONS FOR WELDED AND SEAMLESS STEEL PIPE (A 53-69). A 53-72a.
3. SPECIFICATIONS FOR GRAY IRON CASTINGS FOR VALVES, FLANGES AND PIPE FITTINGS (A 126-66). A 126-71.
4. SPECIFICATIONS FOR DUCTILE IRON FOR PRESSURE CONTAINING CASTINGS FOR USE AT ELEVATED TEMPERATURES (A 395-68). A 395-70.
5. SPECIFICATIONS FOR SEAMLESS COPPER WATER TUBE (B 88-69). B 88-72.
6. SPECIFICATIONS FOR ALUMINUM-ALLOY DRAWN SEAMLESS TUBES (B 210-68). B 210-73.
7. TEST FOR PENETRATION FOR BITUMINOUS MATERIALS (D 5-65). D 5-71.
8. STANDARD METHOD OF TEST FOR FLASHPOINT BY THE TAG CLOSED TESTER (D 56-69). D 56-73.
9. STANDARD METHOD OF TEST FOR DISTILLATION OF PETROLEUM PRODUCTS (D 86-62). D 86-67.

10. STANDARD METHOD OF TEST FOR FLASHPOINT BY THE PENSKY MARTENS CLOSED TESTER (D 93-69). D 93-73.
11. STANDARD METHOD OF TEST FOR VAPOR PRESSURE OF PETROLEUM PRODUCTS (REID METHOD)(D 323-68). D 323-72.
12. TEST FOR FLAMMABILITY OF PLASTIC SHEETING AND CELLULAR PLASTICS. D 1692-68.

(e) CGA Standards. The following standards may be procured for personal use from the Compressed Gas Association, 500 Fifth Avenue, New York, New York 10036.

1. STANDARD FOR VISUAL INSPECTION OF COMPRESSED GAS CYLINDERS. C-6-1968.
2. STANDARDS FOR REQUALIFICATION OF ICC-3HT CYLINDERS (C-8-1962). C-8-1972.
3. ACETYLENE (G-1-1966). G-1-1972.
4. ACETYLENE TRANSMISSION FOR CHEMICAL SYNTHESIS. G-1.3-1959.
5. OXYGEN (G-4-1962). G-4-1972.
6. STANDARD FOR GASEOUS HYDROGEN AT CONSUMER SITES (G-5.1-1961). G-5.1-1969.
7. COMMODITY SPECIFICATION FOR AIR. G-7.1-1966.
8. STANDARD FOR THE INSTALLATION OF NITROUS OXIDE SYSTEMS AT CONSUMER SITES. G-8.1-1964.
9. SAFE HANDLING OF COMPRESSED GASES. P-1-1965.
10. SAFETY RELIEF DEVICE STANDARDS FOR COMPRESSED GAS STORAGE CONTAINERS, Part 3 (S-1.3-1959). S-1.3-1966.
11. SAFETY RELIEF DEVICE STANDARDS--CYLINDERS FOR COMPRESSED GASES (S-1.1-1963, Addenda 1965). S-1.1-1972.
12. SAFETY RELIEF DEVICE STANDARDS--CARGO AND PORTABLE TANKS FOR COMPRESSED GASES (S-1.2-1963). S-1.2-1966.

(f) NFPA Standards. The following standards may be procured for personal use from the National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 02210.

1. STANDARD FOR THE INSTALLATION OF PORTABLE FIRE EXTINGUISHERS (NFPA 10-1970). NFPA 10-1973.
2. RECOMMENDED GOOD PRACTICE FOR THE MAINTENANCE AND USE OF PORTABLE FIRE EXTINGUISHERS (NFPA 10A-1970). NFPA 10A-1973.
3. STANDARD FOR FOAM EXTINGUISHING SYSTEMS (NFPA 11-1970). NFPA 11-1973.
4. STANDARD ON CARBON DIOXIDE EXTINGUISHING SYSTEMS (NFPA 12-1968). NFPA 12-1973.

5. STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (NFPA 13-1969).
NFPA 13-1973.
6. STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (NFPA 14-1970).
NFPA 14-1973.
7. STANDARD FOR WATER SPRAY FIXED SYSTEMS FOR FIRE PROTECTION (NFPA 15-1969).
NFPA 15-1973.
8. STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS (NFPA 17-1969). NFPA 17-1973.
9. STANDARD FOR THE INSTALLATION OF CENTRIFUGAL FIRE PUMPS (NFPA 20-1970).
NFPA 20-1972.
10. STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION (NFPA 22-1970).
NFPA 22-1971.
11. STANDARD FOR OUTSIDE PROTECTION (NFPA 24-1970). NFPA 24-1973.
12. FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE (NFPA 30-1969). NFPA 30-1973.
13. STANDARD FOR THE INSTALLATION OF OIL BURNING EQUIPMENT (NFPA 31-1968).
NFPA 31-1972.
14. STANDARD FOR SPRAY FINISHING USING FLAMMABLE AND COMBUSTIBLE MATERIALS
(NFPA 33-1969). NFPA 33-1973.
15. STANDARD FOR DIP TANKS CONTAINING FLAMMABLE OR COMBUSTIBLE LIQUIDS (NFPA
34-1966). NFPA 34-1971.
16. STANDARD FOR THE INSTALLATION AND USE OF STATIONARY COMBUSTION ENGINES
AND GAS TURBINES. NFPA 37-1970.
17. STANDARD FOR THE INSTALLATION AND OPERATION OF OXYGEN-FUEL GAS SYSTEMS
OR WELDING AND CUTTING (NFPA 51-1969). NFPA 51-1973.
18. STANDARD FOR FIRE PROTECTION IN USE OF CUTTING AND WELDING PROCESSES
(NFPA 51B-1962). NFPA 51B-1971.
19. STANDARD FOR THE INSTALLATION OF GAS APPLIANCES AND GAS PIPING. NFPA 54-1969.
20. STANDARD FOR THE INSTALLATION OF GAS PIPING AND GAS EQUIPMENT ON INDUSTRIAL
PREMISES AND CERTAIN OTHER PREMISES. NFPA 54A-1969.
21. STANDARD FOR THE STORAGE AND HANDLING OF LIQUEFIED PETROLEUM GASES
(NFPA 58-1969). NFPA 58-1972.
22. STANDARD FOR THE PREVENTION OF DUST EXPLOSIONS IN THE PRODUCTION,
PACKAGING AND HANDLING OF PULVERIZED SUGAR AND COCOA. NFPA 62-1967.
23. GUIDE FOR EXPLOSION VENTING. NFPA 68-1954.
24. NATIONAL ELECTRICAL CODE (ANSI C1-1968) (NFPA 70-1968). NFPA 70-1971.

25. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS FOR WATCHMAN, FIRE ALARM AND SUPERVISORY SERVICE (NFPA 72A-1967). NFPA 72A-1972.
26. LIGHTNING PROTECTION CODE. NFPA 78-1968.
27. STANDARD FOR FIRE DOORS AND WINDOWS (NFPA 80-1970). NFPA 80-1973.
28. STANDARD FOR OVENS AND FURNACES, DESIGN, LOCATION AND EQUIPMENT (NFPA 86A-1969). NFPA 86A-1973.
29. STANDARD FOR THE INSTALLATION OF BLOWER AND EXHAUST SYSTEMS FOR DUST, STOCK AND VAPOR REMOVAL OR CONVEYING (ANSI Z33.1-1961) (NFPA 91-1961). NFPA 91-1973.
30. CODE FOR LIFE SAFETY FROM FIRE IN BUILDINGS AND STRUCTURES (NFPA 101-1970). NFPA 101-1973.
31. STANDARD FOR SCREW THREADS AND GASKETS FOR FIRE HOSE COUPLINGS. NFPA 194-1968.
32. STANDARD FOR CARE OF FIRE HOSE (INCLUDING COUPLINGS AND NOZZLES) (NFPA 198-1969). NFPA 198-1972.
33. MANUAL ON ROOF COVERINGS. NFPA 203M-1970.
34. STANDARD TYPES OF BUILDING CONSTRUCTION. NFPA 220-1961.
35. STANDARD METHODS OF FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS (NFPA 251-1969). NFPA 251-1972.
36. FIRE PROTECTION STANDARD FOR MOTORCRAFT (PLEASURE AND COMMERCIAL) (NFPA 302-1968). NFPA 302-1972.
37. RECOMMENDED REGULATORY STANDARD FOR TANK VEHICLES FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS (NFPA 385-1966). NFPA 385-1971.
38. STANDARD FOR PURGED ENCLOSURES FOR ELECTRICAL EQUIPMENT IN HAZARDOUS LOCATIONS (NFPA 496-1967). NFPA 496-1972.
39. STANDARD FOR TYPE DESIGNATIONS, AREAS OF USE, MAINTENANCE AND OPERATION OF POWERED INDUSTRIAL TRUCKS (NFPA 505-1969). NFPA 505-1973.
40. STANDARD FOR THE INSTALLATION OF BULK OXYGEN SYSTEMS AT CONSUMER SITES (NFPA 566-1965). NFPA 50-1973.
41. CODE FOR THE PREVENTION OF DUST IGNITION IN SPICE GRINDING PLANTS (NFPA 656-1959). NFPA 656-1971.

(g) Miscellaneous Standards. The following standards may be procured for personal use from the organizations listed.

1. American Conference of Governmental Industrial Hygienists, 1014 Broadway, Cincinnati, Ohio 45301, INDUSTRIAL VENTILATION, 1971; THRESHOLD LIMIT VALUES OF AIRBORNE CONTAMINANTS.

2. Air Moving and Conditioning Association, Inc., 30 West University Drive, Arlington Heights, Illinois 60004, STANDARD TEST CODE FOR AIR MOVING DEVICES, BULLETIN 210, 1967.
3. International Association of Plumbing and Mechanical Officials, 5032 Alhambra Avenue, Los Angeles, California 90032, ELECTRICALLY OPERATED RECIRCULATING CHEMICAL CONTROLLED TOILET, TSC-12-65.

Ind 1000.50 WISCONSIN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE RULES.

(1) The rules in this section include:

- (a) Title 29--Labor, Part 1910, OCCUPATIONAL SAFETY AND HEALTH STANDARDS, Vol. 37, No. 202, Part II, October 18, 1972, Washington, D. C.

Exclusions:

Part 1910

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federd register

WEDNESDAY, OCTOBER 18, 1972

WASHINGTON, D.C.

Volume 37 ■ Number 202

PART II



DEPARTMENT OF LABOR

■
OCCUPATIONAL SAFETY
AND HEALTH
ADMINISTRATION

■
OCCUPATIONAL SAFETY
AND HEALTH STANDARDS

(b) Title 29--Labor, Part 1926, SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION,
Vol. 37, No. 243, Part II, December 16, 1972, Washington, D. C.

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federal register

SATURDAY, DECEMBER 16, 1972
WASHINGTON, D.C.

Volume 37 ■ Number 243



PART II

DEPARTMENT OF LABOR

Occupational Safety and Health Administration



Safety and Health Regulations for Construction

(c) Title 29--Labor, Part 1918 only, SAFETY AND HEALTH STANDARDS FOR MARITIME EMPLOYMENT, Vol. 37, No. 203, Part II, October 19, 1972, Washington, D.C.

Exclusions:

Part 1918

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22531	1918.4	Penalty
22531	1918.6 (b), (b)(1), (b)(2), (c) and (d)	Standards incorporation by reference
22532	1918.8	Amendments to this part
22532	1918.11	Gangway and gear certification
22532	1918.12	Cargo certification
22532	1918.21	Gangways and other means of access
22533	1918.22	Jacob's ladders
22533	1918.23	Access to barge and river towboats
22533	1918.24	Bridge plates and ramps
22533	1918.25	Ladders
22533	1918.31	Hatch covers

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PART II



DEPARTMENT OF LABOR

Occupational Safety and Health Administration



Safety and Health Standards for Maritime Employment

Revision

Ind 1000.70 WISCONSIN SUPPLEMENTARY SAFETY AND HEALTH ADMINISTRATIVE RULES.

(1) The rules in this section include:

- (a) Chapter Ind 1--Safety
- (b) Chapter Ind 5--Explosives and Blasting Agents
- (c) Chapter Ind 6--Trench, Excavation and Tunnel Construction
- (d) Chapter Ind 8--Flammable and Combustible Liquids
- (e) Chapter Ind 9--Liquefied Petroleum Gases
- (f) Chapter Ind 11--Occupational Noise Exposure
- (g) Chapter Ind 12--Work Under Compressed Air
- (h) Chapter Ind 19--Illumination Code
- (i) Chapter Ind 20--Dusts, Fumes, Vapors and Gases
- (j) Chapter Ind 21--Spray Coating
- (k) Chapter Ind 35--Safety in Construction
- (l) Chapter Ind 43--Anhydrous Ammonia
- (m) Chapter Ind 44--Personnel Hoists
- (n) Chapter Ind 49--Migrant Labor Camps
- (o) Electrical Code, Vol. 2

Note to Revisor: The words "industrial commission" are to be replaced with the word "department".

Chapter Ind 20 is repealed and recreated to read:

CHAPTER IND 20

DUSTS, FUMES, VAPORS AND GASES

Ind 20.01 APPROVAL OF PLANS.

- (1) Plans and specifications for exhaust ventilation equipment installed, remodeled or moved under this code shall be submitted to the department in triplicate for approval before the affected work is commenced, and all work shall be executed according to the approved plans and specifications.
- (2) A complete set of plans bearing the stamp of approval shall be kept at the building at all times.

Note: Extra copies of the plans may be filed for the approval stamp, but they should accompany the triplicate plans.

Note: Section 101.19, Wis. Stats., authorizes the department to fix and collect fees for the approval of plans and provides that no plans shall be approved by the department until the required fees have been paid.

Chapter Ind 21 is repealed and recreated to read:

CHAPTER IND 21

SPRAY COATING

- Ind 21.01 Scope and purpose
- Ind 21.02 Existing booths
- Ind 21.03 Plans. Booth installations
- Ind 21.04 Definitions

Spray Coating of Buildings, Structures and Outdoor Spraying

- Ind 21.05 Scope
- Ind 21.06 Equipment
- Ind 21.07 Operation
- Ind 21.08 Protection of person

Spray Finishing Operations Inside of Buildings

- Ind 21.09 Scope

Spray Finishing Operations Using Flammable and Combustible Liquids

- Ind 21.10 Scope

SCOPE AND PURPOSE

Ind 21.01 Scope. These rules shall govern the use and control of all spray coating apparatus, in every place of employment; provided, however, that they shall not prohibit any farmer, horticulturist, fruit grower, or other person engaged in farming or fruit or vegetable growing, from using spray coating apparatus for the purpose of spraying trees, shrubs, and vines with chemicals to protect the same from disease; or prohibit any dairyman, creamery owner or operator or other person from using any spray coating apparatus to spray any building or part thereof with solutions composed of water and chemicals of recognized value in keeping said building in a sanitary condition.

Ind 21.02 Existing booths. These rules are not applicable to existing installations except where adequate protection to the health and safety of the operator or helper requires alterations. All such alterations shall show reasonably close adherence to the provisions of these rules.

Ind 21.03 Plans. Booth installations. Plans and specifications in duplicate shall be submitted to the industrial commission for approval before installing any spray booth. ←

DEFINITIONS

Ind 21.04 Definitions. (1) APPARATUS, SPRAY COATING. Any and all devices and equipment used in the application of finishing materials by a method employing air pressure.

(2) APPROVED. Of such design and arrangement as to meet the approval of the industrial commission of Wisconsin. ←

(3) BOOTHS. CABINET, CANOPY, ROOM AND TUNNEL. (a) *Cabinet booth*. An enclosure open on one side only and equipped with independent exhaust system.

(b) *Canopy booth*. An overhead dome enclosure open on all sides at the bottom and equipped with an independent exhaust system.

(c) *Room booth*. A room or enclosure equipped with independent exhaust system.

(d) *Tunnel booth*. An enclosure with both ends open equipped with independent exhaust system.

(4) BREATHING ZONE. The immediate area around the mouth and nose of the operator while in a working position.

(5) CONTAMINATED AIRWAY. A contaminated airway in connection with any type of spray booth is any duct, chamber or space containing vapors or fumes of a deleterious, flammable or explosive character, or of other harmful nature, generated by spray coating operations.

(6) DISCHARGE ORIFICE. An opening through which ventilating air is discharged from a booth.

(7) DISCHARGE PIPE. An extension of the discharge orifice to convey spray-laden or contaminated air to the outside atmosphere.

(8) DISTRIBUTOR PLATES. Solid or perforated non-combustible plates placed in a booth to deflect and distribute air currents.

(9) EXHAUST SYSTEM. All equipment connected with the removal of ventilating air from the spray zone.

(10) INCOMBUSTIBLE MATERIAL. Material which cannot be burned.

(11) INSTALLATIONS, EXISTING AND NEW. (a) *Existing installations.* Installations in existence and use prior to the effective date of this code.

(b) *New installations.* Installations completed or the contracts for which are let after the effective date of these rules.

(12) LAMPS, EXTENSION, PORTABLE, EXPLOSION-PROOF AND VAPOR-PROOF. (a) *Extension lamp.* Lamp or extension cord not fixed, nor self-supporting, and not equipped with standard.

(b) *Portable, explosion-proof lamp.* A portable explosion-proof lamp is a lamp not fixed but with self-supporting, properly weighted stand, capable of being readily moved and having the lighting unit so designed and constructed that its use to provide artificial illumination at different points within any type of spray booth will not ignite any fumes, vapors, or residues formed in the process of coating objects with a spray gun.

(c) *Vapor-proof or vapor-tight lamp.* A lamp that is so enclosed that vapor will not enter the enclosure.

(13) { ORIFICE
 } OUTLET (See DISCHARGE ORIFICE)

(14) PLACE OF EMPLOYMENT. For purposes of administering this code a place of employment is any place where spray coating is being carried on for profit.

(15) PRESSURE, ATOMIZING AND PAINT. (a) *Atomizing pressure.* Pressure of the air used to atomize or break up the paint or other coating material.

(b) *Paint pressure.* Pressure in a closed tank bearing on the paint or other coating material to raise it to the spray gun level.

(16) PRESSURE REGULATOR. An instrument or device for regulating or controlling air pressure.

(17) **PRESSURE TANK.** A tank in which air pressure is used to develop pressure on paint or other coating material.

(18) **RESPIRATORS, AIR LINE AND CHEMICAL CARTRIDGE.** (a) *Air line respirator.* A device consisting of a hood or head and face covering to which fresh air is fed creating a slight outward pressure excluding fumes and mist thus permitting breathing of uncontaminated air.

(b) *Chemical cartridge respirator.* A respirator which is equipped with a chemical cartridge or cannister which mechanically removes solid particles and chemically removes vapors from air being breathed.

(19) **SETTLING CHAMBER.** A space located in the exhaust air stream for the purpose of collecting solids in spray mist.

(20) **SPRAY GUN.** A mechanical device employing air pressure for the application of paints, varnishes, lacquers and similar finishing materials.

(21) **VACUUM TYPE. (Feed Cup).** (Sometimes erroneously referred to as siphon type). A type of materials container in which the liquid is drawn into the atomizing air stream by a partial vacuum created by the flow of air over the paint chamber outlet opening.

(22) **VENTILATING SYSTEM.** (See EXHAUST SYSTEM)

SPRAY COATING OF BUILDINGS, STRUCTURES AND OUTDOOR SPRAYING

Ind 21.05 Scope. The requirements of this section, sections Ind 21.05 to Ind 21.08, inclusive, shall apply to all spray coating operations on buildings, ships and structures of any kind or nature, and to all outdoor spray coating operations, but these requirements need not apply to spray coating operations in approved booths.

Ind 21.06 Equipment. (1) TYPE OF EQUIPMENT. Any type of equipment may be used except the vacuum type of more than one quart capacity.

Note: The vacuum type of spray coating apparatus is sometimes erroneously referred to as siphon type, suction type and ejector type.

(2) **CHARACTER OF EQUIPMENT.** All spraying equipment shall be complete in all details essential to effective operation and prevention of excessive mist.

Ind 21.07 Operation. (1) NOZZLE DISTANCE FROM SURFACE. During operation the nozzle of the spray gun shall not at any time be more than 18 inches from the surface being spray coated.

(2) **SCAFFOLDING.** When necessary, scaffolding or other approved support shall be used so that the maximum allowable distance between gun nozzle and surface being spray coated will not be exceeded.

Note: For safety in scaffold construction refer to Wis. Adm. Code, Ch. Ind 35, Safety in Construction.

(3) **MAXIMUM ALLOWABLE PAINT PRESSURE.** The paint pressure shall at no time exceed that necessary to produce a free flow of paint at the nozzle when the gun is operated independent of atomizing pressure.

Notes: 1. Testimony of spray gun manufacturers and observations have shown that excessive paint pressure over that actually necessary to produce this result requires a correspondingly higher atomizing pressure, resulting in excessive mist.

2. Exterior painting—Wind advantage. During exterior spray coating, the operator should at all times take advantage of draft and wind conditions, spraying with the air current whenever possible.

3. Interior painting—Natural ventilation. During interior spray coating of walls or structural members of a building the operator should at all times produce and maintain all ventilation possible by opening doors and windows, spraying with the air current whenever possible.

(4) OPERATION AT DIFFERENT LEVELS. At no time shall 2 or more operators working at elevations differing more than 8 feet use paint from the same supply tank unless spray guns are equipped with paint pressure regulators.

Note: If this maximum allowable difference in working elevations were exceeded, the operators working at the lower levels would be subjected to excessive mist.

(5) EXCLUSION OF OTHERS. None other than spray operators and their helpers shall be permitted within a zone where a mist or deposit is apparent, unless such a person is protected the same as operators and helpers.

(6) CONTAMINATION OF ADJACENT AREAS. Proper precautionary measures shall be taken to prevent contamination of the atmosphere in adjacent occupied areas.

Ind 21.08 Protection of person. (1) NOSE AND MOUTH PROTECTION.

(a) The nose and mouth of each operator and of any other person in the area contaminated by spray, shall be protected with an approved respirator or other approved device furnished and maintained in a clean and efficient condition by the employer. In every case where interior spray coating is done, except when the operation is confined to an approved booth, an approved respirator, or an approved device having a source of fresh air supply independent of the interior being sprayed, shall be used by each employee in the contaminated area.

(b) Where air is supplied from outside the contaminated area, such air shall be obtained from such a source and conveyed in such a manner as to prevent the introduction of any hazardous gases, dusts, fumes, or vapors into the respirator.

(2) CLEANSING OF RESPIRATORS. Every respirator shall be cleansed at least once each day. Where the filter type respirator is used, the filter shall be replaced not less than twice each working day, or oftener if necessary. In case of intermittent use of a filter type respirator, it shall be cleansed and filter replaced at least once each calendar day of use. Unless sterilized provisions shall be made to insure that the cleansed respirators are returned to the same individuals who used them prior to the cleansing.

Note: The following suggestions are offered in order to give information as to cleansing respirators: Remove head bands and filtering elements and thoroughly wash the respirators in warm soapy water. After this any one of the following solutions may be used for sterilizing purposes: (1) a solution of one part of formaldehyde solution in nine parts of water; (2) a solution of denatured alcohol; (3) a 2% solution of lysol; (4) a 3% solution of carbolic acid; (5) exposure at room temperature for 10 minutes in a moist atmosphere of antiseptic gas preferably formaldehyde; (6) scrub with a brush in a solution of 5 fluid ounces of cresolis compound and 4 gallons of water. Following this the respirators should be thoroughly rinsed with warm water and allowed to dry.

(3) APPROVAL OF RESPIRATORS. Every respirator or other such device used shall be such as to meet the approval of the industrial commission.

Note: The chemical cartridge respirator is the only one of the filter type that will be approved for use in spray coating.

(4) HEAD PROTECTION. The head shall be covered with a low fitting cap with visor.

(5) BODY PROTECTION. The body shall be covered with clothing as close fitting as possible consistent with comfort, paying particular attention to the fit at neck and wrists.

(6) HAND PROTECTION. The hands shall be protected by suitable gloves, preferably of the gauntlet type.

(7) RESPONSIBILITY AND MAINTENANCE. All protective clothing shall be furnished and maintained in a sanitary condition by the employer. A complete change shall be furnished at least once each week or oftener if necessary.

(8) FACE AND NECK ANOINTED. All exposed parts of the body shall be kept anointed with non-irritating, protective oil, grease or cream during spray coating operations.

(9) WASHING FACILITIES. Clean rags shall be furnished by the employer and washing facilities shall be provided in compliance with the general orders on Sanitation.

Note: The purpose of this is to eliminate the necessity of washing with turpentine or naphtha, the continued use of which is extremely irritating to the skin.

SPRAY FINISHING OPERATIONS INSIDE OF BUILDINGS

Ind 21.09 SCOPE. The requirements of section Ind 1000.04, subpart G, section 1910.94 (c) shall apply to all spray coating operations inside of buildings except the spray coating of walls, structural members and fixtures of a building or other structure.

SPRAY FINISHING OPERATIONS USING FLAMMABLE AND COMBUSTIBLE LIQUIDS

Ind 21.10 SCOPE. The requirements of section Ind 1000.04, subpart H, section 1910.107 shall apply to all spray finishing operations using flammable and combustible liquids.

Chapter Ind 44 is repealed and recreated to read:

PERSONNEL HOISTS

Chapter Ind 44

Ind 44.001	Definition; personnel hoist	Ind 44.18	Cable guards for sheaves & idlers
Ind 44.01	General requirements	Ind 44.19	Hoist cable data
Ind 44.02	Plan examination fee	Ind 44.22	Guide rails
Ind 44.03	Application	Ind 44.23	Minimum size of sheaves
Ind 44.06	Inspection fee	Ind 44.24	Machinery, general requirements
Ind 44.091	Personnel hoist installation & dismantling	Ind 44.25	Prohibited installations
Ind 44.11	Platforms and sill clearances	Ind 44.32	Electrical protection
Ind 44.12	Car construction	Ind 44.34	Lighting
Ind 44.16	Cable (wire rope) terminal fastenings	Ind 44.35	Operation
		Ind 44.36	Maintenance

Ind 44.001 Definition; personnel hoist. A temporary structure designed and installed primarily for the purpose of transporting personnel vertically during the period of building construction or construction projects.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.01 General requirements. (1) Personnel hoists shall be installed to conform with the requirements as outlined in this subsection:

- (a) Plans; new installations. 1. Before starting the erection on any new installation of a personnel hoist 3 copies of plans shall be submitted to the department for approval with 2 copies of application for each unit, properly filled out on forms furnished by the department.
- (b) Forms. The forms referred to under (a) 1. and section Ind 44.03 are SB-22, application for construction and erection, and may be obtained from the department of industry, labor and human relations, P. O. Box 2209, Madison, Wisconsin 53701.

(c) *Submission of plans and application.* Every manufacturer who furnishes equipment as described in Wis. Adm. Code section Ind 44.01 (1) to be installed by the owner or an agent of the owner shall submit plans and application.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Register, April, 1973, No. 208
Personnel Hoists

Ind 44.02 Plan examination fee. A plan examination fee in the amount established by the Wis. Adm. Code, Ch. Ind 69, Fee Schedule, shall be paid for each installation requiring approval.

Ind 44.03 Application. Before starting the erection of a hoist moved to a new location, application in duplicate, properly filled out, shall be submitted to the department for approval, on forms furnished by the department. (See subsection Ind 44.01 (1)(b).)

Ind 44.06 Inspection fee. An inspection fee in the amount established by the Wis. Adm. Code, Ch. Ind 69, Fee Schedule, will be charged by the department for each inspection of each personnel hoist.

Ind 44.091 Personnel hoist installation and dismantling. (1) During installation or dismantling of personnel hoists and accessory equipment, including the tower, no person shall be permitted to ride any part of the equipment.

(a) Before any work is begun on the electrical control system, all personnel elevator hoisting equipment shall be in permanent position including hoisting and counterweight cables, the governor, the governor cable and the safety device.

Exception to Ind 44.091: Any personnel hoists having the governor and safety device engaged and/or operational during erection and dismantling of the hoist.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.

Ind 44.11 Platforms and sill clearances. (1) Where a platform is provided between the tower and the building, the open or exposed sides shall be provided with a standard guard rail 42 inches in height with an intermediate guard and a toeboard not less than 4 inches in height at the edge of the platform.

(a) The clearance between the car sill and any landing sill shall be not less than $\frac{1}{2}$ inch or more than 3 inches.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.12 Car construction. (1) Every personnel hoist shall have a car frame consisting of a crosshead, uprights (stiles), and a plank located approximately at the middle of the car platform.

(a) Car frames shall be guided on each guide rail by upper and lower guide shoes attached to the frame.

(b) The frame and its guiding members shall be designed to withstand the forces resulting under the loading conditions for which the hoist is designed.

(c) When cars are suspended by hoist cables attached to the car frame by means of cable shackles, the shackles shall be attached to the steel hitch plates or to structural steel shapes. Such plates or shapes shall be secured to the underside or to the webs of the car frame members with bolts or rivets so located that the tensions in the hoisting ropes will not develop direct tension on the bolts or rivets.

(d) Every hoist shall have a platform consisting of a solid floor attached to the platform frame supported by the car frame and extending over the entire area within the car enclosure. The platform frame members and the floors shall be designed to withstand the forces developed under the loading conditions for which the elevator is designed and installed.

(e) Cast iron shall not be used for any part subject to tension, torsion, or bending.

(f) The car frame members shall be securely welded, bolted and/or riveted and braced.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.16 Cable (wire rope) terminal fastenings. (1) The car and counterweight cable fastenings shall comply with one of the following methods:

(a) Shackle rods, or, approved clamps.

1. Where cable sockets and shackle rods are used not more than one cable shall be fastened in the same shackle.

2. Cable sockets and shackle rods shall be of forged steel and shall have a strength of at least equal to the manufacturer's strength of the cable.

3. The threaded length of each shackle rod shall be provided with lock nuts and cotter pinned.

(b) Where approved clamps are used they shall be provided with metal thimbles and shall conform with the following:

1. Clamps shall not be of the U-bolt type.

2. Both members of the clamps shall be provided with seats conforming to the lay of the cable.

3. Clamps shall be drop forgings.

4. The cables to be clamped shall be passed around metal thimbles having not less than the following dimensions and fastened by at least the number of clamps specified, with not less than the spacing indicated in this subsection.

Diameter Wire Rope Inch	Inside Width of Thimble Inches	Length of Thimble Inches	Minimum No. of Clamps	Minimum Spacing of Clamps Inches
$\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{3}{4}$	3	3
$\frac{3}{8}$	$1\frac{3}{4}$	$3\frac{1}{4}$	3	$3\frac{3}{4}$
$\frac{3}{4}$	2	$3\frac{3}{4}$	4	$4\frac{1}{2}$

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.18 Cable guards for sheaves and idlers. Every sheave or idler under which is led any hoisting or governor cable shall be provided with a guard that will keep the cables on the sheave or idler if the cables become slack.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.19 Hoist cable data. There shall be posted for permanent record in a conspicuous place on the car beam a metal sign bearing the following original data:

CABLE SPECIFICATIONS

Kind of cable -----
 Number of cables -----
 Diameter in inches -----
 Rated ultimate strength -----
 Date of installation -----

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.22 Guide rails. (1) Every hoist shall have T-section steel guide rails and shall be not less than 15 pounds for the car and not less than 8 pounds for the counterweight.

Exception: Guides other than T-sections or guides of sizes different from that outlined in Wis. Adm. Code section Ind 44.22 (1) may be used, providing that the tensile strength is not less than the requirement outlined in Wis. Adm. Code section Ind 44.22 (1) (a).

(*Note:* See Wis. Adm. Code section Ind 44.22 (1) (b).)

(a) Guide rails, brackets, clips, fish plates and their fastenings shall be made of open hearth steel or its equivalent having a tensile strength of not less than 55,000 pounds per square inch and having an elongation of not less than 22% in a length of 2 inches, and shall conform with the requirements outlined in this subsection.

1. The ends of the guide rails shall be accurately machined with tongue and matching groove or doweled.

2. The ends of each rail shall be joined together with fish plates and not less than 4 bolts which shall be not less than $\frac{1}{2}$ inch for 8 pound guide rails and not less than $\frac{5}{8}$ inch for 15 pound guide rails.

3. The width of the fish plate shall be not less than the width of the back of the rail and shall be not less than $\frac{1}{8}$ inch in thickness for 8 pound guide rails and not less than $\frac{1}{4}$ inch in thickness for 15 pound guide rails.

4. The top and bottom of each guide rail shall be so located in relation to the extreme position of the travel of the car and counterweight that the car and counterweight guiding members cannot travel beyond the ends of the guide rails.

5. The guide rails shall not be used to support the overhead machinery.

6. The guide rail bracket spacings for car and counterweight shall not exceed 14 feet and the total rail deflection shall not exceed $\frac{1}{4}$ inch.

7. Foundation plates or other structural shapes shall be mounted under and fastened to the bottom end of the car guide rails.

8. Guide rails shall be secured to the tower by clips or by bolts.

(b) Steel tubing used in lieu of T-section guide rails shall be equal in design and construction to conform with the following:

1. Shall be not less than 3 inches O.D. Seamless Tubing 100,000 psi Tensile; 90,000 psi Minimum Yield.

2. The car safety device shall be equipped with a supporting member to prevent the collapse of the tubing upon setting of the car safety device with contract load at governor tripping speed.

3. A form shall be submitted covering a certified test used in the tower construction.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.23 Minimum size of sheaves. The diameter of sheaves for traction machines shall be not less than 40 times the diameter of cable. (See Wis. Adm. Code section Ind 44.14.)

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.24 Machinery, general requirements. (1) The factor of safety to be used in the design of driving machines and in design of sheaves and drums used in hoisting shall be not less than the requirements as outlined in this subsection.

(a) Eight (8) for steel, bronze, or for other metals having an elongation of at least 14% in a length of 2 inches.

(b) Ten (10) for cast iron, or for other metals having an elongation of less than 14% in a length of 2 inches.

(c) Set screws or threaded portions of bolts or screws shall not be used to transmit torque.

(d) The fillet shall be provided at any point of change in the diameter of driving machine shafts and sheave shafts to prevent excessive stress concentrations in the shafts. Shafts which support sheaves, couplings and other members and which transmit torque shall be provided with tight-fitting keys.

(2) Gear housings for machines shall have openings so located as to permit proper inspection of gears and gear spider fastenings.

(3) The motor drive on traction machines shall be directly connected to the gearing provided and mounted on a continuous steel or cast iron bed plate.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.25 Prohibited installations. (1) Automatic operation.

(2) Cast iron worm gears shall not be used in any hoisting equipment.

(3) Emergency hoistway landing door or gate and/or car gate by-pass switches.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.32 Electrical protection. (1) Every electrically driven personnel hoist shall be provided with a potential switch which will cause and maintain interruption of power to the main circuit during failure of supply voltage, and the operation of any emergency stopping switches.

(2) A reverse phase relay shall be provided which will prevent starting the motor if the phase rotation is in the wrong direction.

(a) *Exception.* Alternating-current motors used in motor generator sets.

(3) Directional and final limit switches shall be provided to stop the car at each terminal of travel.

(4) A slack cable switch shall be provided on the hoist cables of every drum-type driving machine which shall automatically shut off the power to the driving machine motor in the event the cables break or become slack. This switch shall not reset automatically when the slack in the cable is removed.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.34 Lighting. (1) Cars shall be provided with illumination of an intensity of not less than 5 foot-candles at the edge of the car platform.

(a) A warning or signal light shall be provided on the top and bottom of every car.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65

Ind 44.35 Operation. (1) Hoist shall be operated by authorized personnel.

(2) Material shall not be carried on the car when transporting personnel.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Ind 44.36 Maintenance. (1) Hoists shall be kept in safe operating condition.

(2) Material which is not a permanent part of the hoist shall not be permitted on top of the hoist cover.

(3) Machines located at the lower level shall be protected from falling objects; and shall be enclosed on all open sides to the height of not less than 42 inches.

History: Cr. Register, March, 1965, No. 111, eff. 4-1-65.

Chapter Ind 49 is repealed and recreated to read:

Chapter Ind 49

MIGRANT LABOR CAMPS

Ind 49.01	Scope	Ind 49.19	Camp operators' and occupants' responsibilities
Ind 49.02	Definitions	Ind 49.20	Inspection
Ind 49.03	Plans and specifications	Ind 49.21	Posting of regulations
Ind 49.04	Variations		

Ind 49.01 Scope. This code is to set forth minimum standards for design, construction, operation, repair, maintenance and inspection of all structures, including the site for migrant labor camps as defined in section 146.19, Wis. Stats.

Note: Certification for operation of migrant labor camps is required annually. Application to operate is to be made to the department no later than April 1 or 30 days prior to the opening of a new camp. (Ref. 146.19 Wis. Stats.) Issuance of certificate to operate will be contingent on the camp satisfying the minimum standards of this code.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.02 Definitions. (1) Camp operator is a person who maintains a migrant labor camp as defined in section 146.19, Wis. Stats.

(2) Common use facilities means structures or areas other than sleeping or living quarters designed to be used by camp occupants not members of the same family (see service buildings).

(3) Department means the department of industry, labor and human relations.

(4) Migrant worker is a worker engaged primarily in agricultural and related seasonal industry, or an industrial or construction worker who must move so far in the course of his seasonal employment that he must establish a temporary residence at one or more locations away from the place he calls home.

(5) Occupants means migrant workers and family dependents who move with the workers living in the camp.

(6) Service buildings means common use facilities for housing toilets, lavatories, showers and laundry facilities.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.03 Plans and specifications. (1) Plans and specifications for all new construction including additions to existing buildings intended for use as housing or common use facilities shall be approved by the department before letting contracts or commencing work.

(a) Exception. No prior approval of plans shall be required for the following:

1. Single story buildings for use as housing for not more than 2 families.

2. Buildings for use by not more than 10 persons not members of the same family.

3. Common use facilities containing less than 25,000 cubic feet total volume providing they have no floor or roof span greater than 30 feet and are not more than 2 stories high.

(b) Buildings for which the submission of plans and specifications is waived shall comply with the requirements of this code.

(2) Three copies of plans and one copy of specifications are required for approval.

(3) Plans shall include:

(a) A plot plan of the migrant camp which includes the location and grades of adjoining streets, alleys, lot lines and any other buildings on the same lot or property

(b) Name of owner.

(c) Intended use or uses of all rooms, and the number of persons to be accommodated therein.

(4) All requirements of the Wis. Adm. Code chapters 50-59 Building and Heating, Ventilating and Air Conditioning Code applicable to approval of plans shall apply unless specifically exempted from this code.

(5) One set of approved plans shall be kept by the owner or camp operator and made available to the inspector.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.04 Variations. (1) The department may from time to time grant written permission to individual camp operators to vary from particular provisions set forth in this part when the extent of the variation is clearly specified and it is demonstrated to the department that:

(a) Such variation is necessary to obtain a beneficial use of an existing facility;

(b) The variation is necessary to prevent a practical difficulty or unnecessary hardship; and

(c) Appropriate alternative measures have been taken to protect the health and safety of the occupants and assure that the purpose of the provisions from which variation is sought will be observed.

(2) Written application for such variation shall be filed with the department on form SB-8. No such variation shall be effective until granted in writing by the department.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.19 Camp operators' and occupants' responsibilities. (1) The camp operator or his agent shall clearly explain to camp occupants their responsibilities as to camp occupancy and care.

(a) The camp operator or his agent shall at least once a week inspect the camp area, structures, toilets, showers, and other facilities and see that each is maintained in a clean and orderly condition and that broken or damaged property is promptly repaired.

(b) The camp operator shall designate an individual to maintain the grounds and common use facilities in a clean and orderly condition at least daily.

(c) In camps occupied by 100 or more persons, the camp operator shall provide a full-time person to perform these duties.

(2) Each occupant of a camp shall use the sanitary and other facilities furnished for his convenience and shall comply with applicable camp regulations which may concern or affect his conduct.

(a) Each occupant shall keep in a clean and orderly manner that part of the camp and premise which he occupies or uses.

(b) Each occupant to whom a dwelling unit has been assigned shall be responsible for the cleanliness of that unit and adjacent grounds.

(c) Each occupant shall dispose of his rubbish and garbage by placing it in containers provided for this purpose.

(3) The camp operator shall designate some individual or employee to be responsible for the compliance with these standards and such person's name is to appear on the regulations posted in accordance with section Ind 49.21.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.20 Inspection. (1) All migrant labor camps including individual dwelling units shall be opened to inspection at all reasonable hours by representatives of the department.

(a) The inspector shall make his presence known to the camp operator or an adult member of the operator's immediate family or the person designated as responsible for compliance with these standards before making an inspection.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.

Ind 49.21 Posting of regulations. A summary of these regulations, prepared by the department, shall be posted in the camp where they can be easily seen by the camp occupants and shall state where copies of the regulations may be obtained.

History: Cr. Register, November, 1969, No. 167, eff. 1-1-70.