

NEW ZEALAND GOVERNMENT RAILWAYS	<b>LOCOMOTIVE, ROLLING- STOCK, AND AUXILIARY EQUIPMENT SECTIONS.</b>	<b>CODE No. 48</b>	
<b>MECHANICAL BRANCH</b>		Page No. 1 of 5	Issue No 2      Date Issued 20/11/35

**(1) LOCOMOTIVE SECTIONS (NOT INCLUDING ELECTRIC LOCOMOTIVES).**

- 1 L. Arrangement: General.
- 2 L. Arrangement: Piping.
- 3 L. Ashpan, doors, dampers, and rods.
- 4 L. Axleboxes, wedges, horns, and hornstays (engine).
- 5 L. Axleboxes, horns, and hornstays (bogie).
- 7 L. Boiler-seatings, expansion brackets, pads for mountings.
- 8 L. Brake-rigging, brake-shaft, including rods, brake-beams, hangers, brake-blocks, and hand brake.
- 9 L. Brake, Westinghouse, including cylinders, pumps, piping, and equipment
- 10 L. Buffers and drawgear.
- 11 L. Cab, including windows, seats, cab tool-boxes, and tablet-exchangers.
- 12 L. Clothing, including lagging, handrails, running-boards, and splashes.
- 13 L. Connecting-rods, including brasses, cotters, straps and strap-belts.
- 14 L. Coupling-rods, including brasses, cotters, and knuckle-pins.
- 15 L. Crossheads, crosshead slippers, side-liners, and gudgeon-pins.
- 16 L. Cylinders, including covers, clothing, and attachments.
- 17 L. Cylinder and relief-cock gear.
- 18 L. Drawgear between engine and tender.
- 19 L. Eccentrics and rods, crank-arms, and valve-rods.
- 21 L. Fire-hole, door, and flame-plate.
- 22 L. Firebrick arch and carriers.
- 23 L. Firebars, including carriers, deadplates, drop grate, and operating-gear.
- 24 L. Framing (engine), including headstocks, framestays, platforms, footsteps, motion brackets, and cow-catchers.
- 25 L. Framing (bogie) and details.
- 26 L. Heating-apparatus and piping.
- 27 L. Injectors and operating-gear.
- 28 L. Lamps and brackets, including generators, wiring, switchgear, and piping.
- 29 L. Lubricator, including brackets, oil-boxes, oil and grease cups, atomizers.
- 30 L. Miscellaneous and experimental.
- 31 L. Motion and weighbar shaft.
- 32 L. Mountings and fittings, including clackbox, blow-off cock, tube-out cock, sniffing-valves, water services, mud-plugs, fusible and washout plugs.
- 33 L. Packings, including packing for piston-rods and valve-spindles.
- 34 L. Pipes, main steam, internal steam and exhaust steam.
- 35 L. Pistons and piston-rods.
- 36 L. Regulator, regulator lover, and details.
- 37 L. Reversing-gear, levers, and details.
- 38 L. Sand-boxes and operating-gear, and rail-washing equipment.
- 39 L. Slide bars and bolts.
- 40 L. Smokebox, including spark-arrester, funnel, ash ejector and blower.
- 41 L. Springs, spring hangers, brackets and details, compensating-gear (engine).
- 42 L. Springs, spring hangers, brackets and details, compensating-gear (bogie).
- 44 L. Superheater, including header, elements, and fittings.
- 45 L. Tanks, equalizing-pipes, injector-supply fittings, bunkers.
- 46 L. Tools and equipment, tool-boxes (not including cab and tender boxes), and signal equipment.
- 48 L. Valves, piston and slide, including spindles.
- 49 L. Valves, safety.
- 50 L. Wheels, tyres, axles, and crankpins (engine).
- 51 L. Wheels, tyres, and axles (bogie).

**(2) LOCOMOTIVE BOILER SECTIONS.**

- 6 L. Boiler-shell, including dome, firebox wrapper, face and throat plates.
- 20 L. Firebox (inside), foundation ring, firehole syphons, and tube plate.
- 43 L. Stays (boiler).
- 47 L. Tubes, flues, and ferrules.

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### (3) LOCOMOTIVE TENDER SECTIONS.

- 1 T. Arrangement: General.
- 2 T. Arrangement: Piping.
- 3 T. Axleboxes, brasses, and horns.
- 4 T. Brake-rigging, including hand-brake and shaft, levers, rods, brake-blocks, hangers.
- 5 T. Brake, Westinghouse, equipment and piping.
- 6 T. Buffers and drawgear.
- 7 T. Drawgear between engine and tender.
- 8 T. Frames (main), including headstocks, framestays, platforms, footsteps, and cow-catchers.
- 9 T. Frames (bogie) and details.
- 10 T. Heating-apparatus and piping.
- 11 T. Lamps, brackets, wiring, and piping.
- 12 T. Miscellaneous and experimental.
- 13 T. Springs, hangers, and details.
- 14 T. Tanks, bunkers and details, injector-supply fittings, rail-washing equipment.
- 15 T. Tools, tool-boxes, and signalling-equipment.
- 16 T. Wheels, tyres, and axles.

### (4) ROLLING STOCK SECTIONS.

- 1 C. Axleboxes.
- 2 C. Body, car, including framing, sheathing, roofing, flooring, panelling, carlines, knees and through-bolts, partitions and sections, &c.
- 3 C. Body, brake-van, postal car, including framing, sheathing, roofing, flooring, panelling, carlines, knees and through-bolts, partitions and sections, &c.
- 4 C. Body, wagon, including framing, sheathing, roofing, flooring, panelling, carlines, knees and through-bolts, partitions and sections, and signwriting.
- 5 C. Bogie, including bolsters, frames, hornblocks, swing-links, bottom bogie-centre, equalizer-beam, frame-stays, check chains, swing links, trunnions, and brackets riveted to bogie.
- 6 C. Brake, Westinghouse, equipment and piping, including general arrangement and patent parts.
- 7 C. Brake-rigging, including levers, rods, hand-brake gear, bogie brake-gear, brake-blocks and links.
- 8 C. Buffers and drawgear, including drag-rods, yokes, cradles.
- 9 C. Clearance and car diagrams.
- 10 C. Doors and windows, including door-shields, window-screens, bars, and blinds.
- 11 C. Electric light and wiring, including lamps, fittings, batteries, battery boxes and fittings, dynamo, and switches.
- 12 C. Fittings, car, including ventilators, door-locks, hat and coat hooks, parcel-nets, class and number plates, ash-trays.
- 13 C. Fittings, brake-van, including ventilators, door-locks, luggage-hooks, ambulance equipment, tools and spare parts, lamps and train following boards, grab-irons.
- 14 C. Fittings, postal car, including ventilators, door-locks, mail-bag hoppers, letter-boxes, postal-plates, pigeon-holes, tables, curtains, and grab-irons.
- 15 C. Fittings, wagon, including ventilators, racks, hooks, load-plates, padding, feed-boxes, oil-lamps, petrol-tank fittings, gas-holder fittings.
- 16 C. Gas lighting and piping, including reservoirs, gas-stoves.
- 17 C. Lavatories and details, including wash-basins, toilet fittings, filter, hopper, cistern, tank, and water connections.
- 18 C. Miscellaneous and experimental.
- 19 C. Seats and seating arrangement, including bunks and bunk-fittings.
- 20 C. Springs and spring-gear.
- 21 C. Steam heat and water heating, including piping, radiators, patent parts.
- 22 C. Underframe and details, including top bogie-centre, knees, step-irons, lamp-brackets, horse-hooks, truss-rods, battery-box trays.
- 23 C. Verandah details, including verandah rails, gates, gangways.
- 24 C. Wheels, tyres, and axles.
- 25 C. Omnibuses and fittings.

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### (5) RAIL-CARS.

The underframes, chassis, engines, brake-gear, bogies, and mechanical parts for rail cars will be classified under the respective sections already provided for locomotives, and the bodies, car fittings, &c., under the respective rolling-stock sections.

Any rail-car section which cannot be classified under the existing locomotive or rolling-stock sections will be included under either miscellaneous locomotive or miscellaneous rolling-stock (Sections 30 L. or 18 C.), the classification depending upon whether the section in question is part of the body or underframe.

### (6) ELECTRIC LOCOMOTIVES.

- 1 E. Arrangement: General.
- 2 E. Arrangement: Piping including air, sand, and lubricating pipes.
- 4 E. Axleboxes (driving), including horn-guides.
- 5 E. Axleboxes (leading and trailing), including horn-guides.
- 8 E. Brake-gear, including rigging and hand brake.
- 9 E. Brake, Westinghouse, including all Westinghouse parts and air-brake arrangement.
- 10 E. Buffers and drawgear; also drawbar and rubbing-blocks between bogies.
- 11 E. Cab and cab details, including windows and arrangement of apparatus.
- 12 E. Compartments and superstructure, including handrails, running-board, &c.
- 24 E. Framing, including underframe, headstocks, and end platforms.
- 25 E. Framing (bogie) and details, including top and bottom bogie centres.
- 26 E. Heating apparatus; all steam-heating parts, including boiler for steam heating and fittings.
- 28 E. Lamps and lamp brackets.
- 29 E. Lubrication, including oil-boxes, grease connections, &c.
- 30 E. Miscellaneous and experimental.
- 38 E. Sand-gear.
- 41 E. Spring hangers (driving), including compensating-gear and motor-suspension details.
- 42 E. Spring hangers (leading and trailing), including compensating-gear and details.
- 45 E. Tanks, including fuel tanks for steam-heat boiler.
- 48 E. Tools and signal equipment.
- 50 E. Wheels, tyres, and axles.
- 52 E. Gearing, details of drive and casing, including pinion.
- 56 E. Blowers, air-ducts, air filters, and ventilating system.
- 57 E. Control apparatus, including starters, reversing-gear, field switch, cam shaft, contactors, &c.
- 58 E. Compressors, compressor motors, gearing, and details.
- 59 E. Fuses, protection devices and relays.
- 60 E. Heaters, electrical.
- 61 E. Instruments for shunts and resistances.
- 62 E. Key and wiring diagrams, including heating, power, lighting, and auxiliary control circuits.
- 63 E. Motor generators and voltage regulators.
- 64 E. Pantographs, including raising gear, lightning-arresters, chokes, and insulators.
- 65 E. Resistances for all motors.
- 66 E. Switches and details, including line-breakers, circuit-breakers, isolating-switches, motor cut-out.
- 67 E. Storage batteries and details.
- 68 E. Traction motors and details, including pinion, axle, suspension bearings, &c.
- 69 E. Radio-interference equipment, including chokes, condensers, &c.

### (7) MOBILE AND STATIONARY STEAM-CRANES-ENGINE SECTIONS.

- 1 S. Arrangement: Piping.
- 2 S. Ashpan, damper, and details.
- 3 S. Axle-bearings, brackets, and details
- 4 S. Bed-plate and details.
- 5 S. Boiler-setting and details.
- 6 S. Ballast-box and details.
- 7 S. Buffers.
- 8 S. Cab, including windows, doors, seats, tool-boxes, and tools.
- 9 S. Cylinders with covers and attachments.
- 10 S. Crossheads, connecting rods, and pins.
- 11 S. Crank-shafts.

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**(7) MOBILE AND STATIONARY STEAM-CRANES-ENGINE SECTIONS – *continued.***

- 12 S. Clutches and details.
- 13 S. Control levers and sections.
- 14 S. Eccentrics and valve-rods.
- 15 S. Framing, including headstocks, outriggers, platforms, and footsteps.
- 16 S. Gear-wheels, gearing, and details.
- 17 S. Hoisting-drum and details.
- 18 S. Injectors and operating-gear.
- 19 S. Jib and details.
- 20 S. Lubricators (steam), oil and grease cups.
- 21 S. Motion gear and weigh-bar shaft, expansion links, hangers, and details.
- 22 S. Packing for piston and valve-rods.
- 23 S. Pistons and piston-rods.
- 24 S. Reversing-gear and details.
- 25 S. Roller rings, race, and details.
- 26 S. Steam control valve.
- 27 S. Slide-bars and details.
- 28 S. Springs, hangers, and brackets.
- 29 S. Tanks, including injector couplings.
- 30 S. Valves, slide.
- 31 S. Valves, safety.
- 32 S. Wheels, tyres, and axles
- [33 S. Bogies and brake gear]
- [34 S. Lighting and details]
- [35 S. Arrangement – General]
- [36 S. Miscellaneous and experimental]

**(8) MOBILE AND STATIONARY STEAM CRANE-BOILER SECTIONS**

- 40 S. Boiler-shell (outside), including funnel and fire-hole door.
- 41 S. Firebox (inside), including foundation-ring, fire-hole, and tube-plates.
- 42 S. Firebars, drop-grate, and details.
- 43 S. Mountings, including check-valves, blow-off cock, mud-plugs, and fusible plugs.
- 44 S. Stays and tubes

**(9) MOBILE AND STATIONARY AIR AND RAN D CRANE SECTIONS.**

- 1 H. Air-cylinders, covers, and details.
- 2 H. Axle-bearings.
- 3 H. Bed-plates, side frames, and details.
- 4 H. Ballast-box and details.
- 5 H. Buffers.
- 6 H. Control valve and levers.
- 7 H. Crank-handle.
- 8 H. Clutches and details.
- 9 H. Drums and brake details.
- 10 H. Framing, including headstocks, outriggers, platforms, and footsteps.
- 11 H. Gear-wheels and details.
- 12 H. Jib, including tie-rods and details.
- 13 H. Lubricators, oil and grease cups.
- 14 H. Packing for piston-rods.
- 15 H. Pistons and piston-rods.
- 16 H. Reversing-gear.
- 17 H. Rollers and swivelling-gear.
- 18 H. Springs, hangers, and brackets.
- 19 H. Wheels, tyres, and axles.

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**(10) DROP-PIT SECTIONS**

- 1 P. Arrangement.
- 2 P. Bed-plate and details.
- 3 P. Cradle for main ram.
- 4 P. Control-valve and details
- 5 P. Cylinder for main ram, including gland and details.
- 6 P. Cylinder for pump, including covers, glands, and details.
- 7 P. Crossheads and gudgeon-pins for pumps.
- 8 P Eccentrics and details for pumps.
- 9 P Gear-wheels and details for pumps.
- 10 P Leather for main ram.
- 11 P Ram, main, and details.
- 12 P. Rams for pumps.
- 13 P Safety-valves.
- 14 P Shafting for pumps.
- 15 P Valves, suction and delivery

**(11) SAND-ELEVATOR SECTIONS.**

- 1 G. Air control valve.
- 2 G. Body.
- 3 G. Cover-plates for hand-holes.
- 4 G. Hopper.
- 5 G. Piping and details.
- 6 G. Pads for hand-holes.
- 7 G. Sand-valve, valve-seating, fulcrum, and levers.
- [8 G. Arrangement.]

**(12) SAND-DRIER SECTIONS.**

- 1 F. Ashbox door, door, catch, and pins.
- 2 F. Baffle-plates.
- 3 F. Cones.
- 4 F. Dome.
- 5 F. Firebox.
- 6 F. Firebox door.
- 7 F. Firebox base.
- 8 F. Fuel-chute.
- 9 F. Grate (outer and centre sections).
- 10 F. Hinge-pins for ashbox and firebox doors.
- 11 F. Legs for base.
- 12 F. Sand-hopper base.
- 13 F. Sand-hopper.
- [14 F. Arrangement.]

**(13) BRANDING.**

All patterns for the manufacture of castings for locomotive, rolling-stock, or auxiliary equipment must be branded with the blue print numbers and the symbols denoting the sections under which the resultant castings are classified. Jigs and templates for the above equipment must also be branded with the sectional symbols.

**(14) RECORDS.**

The sectional index must be used whenever practicable in the compilation of records for locomotive, rolling-stock, and auxiliary equipment.