

CHAPTER 69.

AN ACT

[S. B. 23.]

To repeal Section Eight of Chapter Seventy-two of the Session Laws of Alaska for 1913, entitled, "An Act to divide the Territory into mine inspection districts; to establish the office of mine inspector; to prescribe the duties, powers, qualifications and compensation thereof; to regulate the operation of mines in the Territory of Alaska; to provide for the health and safety of mine workers in the Territory; to declare the violation of any of the provisions hereof a misdemeanor and prescribing punishment therefor," approved April 30, 1913, to amend Sections One and Two thereof; to add Sections Eight to Thirty, inclusive, prescribing duties and powers for Territorial and Federal Mine Inspectors; and to repeal all acts and parts of acts inconsistent or in conflict herewith.

Be It Enacted by the Legislature of the Territory of Alaska:

Sec. 8, Ch. 72,
Session Laws,
1913, repealed.

Section 1. That Section Eight (8) of Chapter Seventy-two of the Session Laws of Alaska for 1913, entitled, "An Act to divide the Territory into mine inspection districts; to establish the office of mine inspector; to prescribe the duties, powers, qualifications and compensation thereof; to regulate the operation of mines in the Territory of Alaska; to provide for the health and safety of mine workers in the Territory; to declare the violation of any of the provisions hereof a misdemeanor and prescribing punishment therefor," approved April 30, 1913, be, and the same hereby is, repealed.

Sec. 1, Ch. 72,
Session Laws,
1913, amended.

Section 2. That Section One (1) of said Chapter Seventy-two of the Session Laws of Alaska for 1913, be amended by striking out in lines 5, 6, 7 and 8 thereof the words "and he shall be under the supervision and subject to the instructions of the federal mine inspectors now appointed as provided by law."

Sec. 2, Ch. 72,
Session Laws,
1913, amended.

Section 3. That Section Two (2) of said Chapter Seventy-two of the Session Laws of Alaska for 1913, be amended by striking out in line three (3) of said section the words "federal mine inspector or the". Provided, however, that the exercise of the jurisdiction of the

Territorial Mine Inspector or Inspectors, shall be subject to the revision and review of the Governor of the Territory of Alaska, and that through him an appeal may be taken subject to the review and revision by the U. S. Bureau of Mines.

Section 4. That the following sections be, and they are hereby, added to said Chapter Seventy-two of the Session Laws of Alaska for 1913: Secs. 8 to 30,
incls. added.

“Section 8. DEFINITIONS: That the term ‘mine’, Definitions. when used in this Act, shall include any and all parts of any mine within the Territory, and any mining plant or equipment connected therewith underground or on the surface, which contributes, or may contribute, to the mining of ore, coal or other metalliferous or non-metalliferous mineral product.

That the term ‘operator’, when used in this Act, shall mean the person, firm, association, company or corporation in immediate possession of any mine or mining claim, or accessories thereof, as owner or lessee thereof, and as such, responsible for the management and condition thereof.

That the words ‘excavation’ and ‘workings’, when used in this Act, signify any or all parts of a mine excavated, including shafts, tunnels, entries, winzes, raises, stopes, open-cuts, and all working places, whether abandoned or in use.

“Section 9. JURISDICTION OF INSPECTORS: That Jurisdiction of
Inspectors. the jurisdiction of the mine inspectors shall cover all branches of mining, shaft-sinking, tunneling, quarrying, and dredging, and the machinery incident to the reduction of ores or the treatment of the material; provided, however, that such jurisdiction shall apply only to the safety of the workers employed in such mining, shaft-sinking, tunneling, quarrying and dredging and around machinery incident to the reduction of ores and treatment of the material. Provided, however, That the Territorial Mine Inspector shall have no jurisdiction under

this Act over coal mines to be worked under lease from the United States government.

Federal Mine Inspector to enforce provisions hereof in absence of Territorial Inspector.

“Section 9½. The Federal Mining Inspector or Inspectors shall have authority in the absence of the Territorial Mining Inspector, to enforce the provisions of this Act. In all such cases the Federal Mining Inspector shall report in detail to the Governor of the Territory of Alaska all cases wherein he has invoked the aid of the Territorial Mine Inspection Act.

Statistical records.

“Section 10. STATISTICAL RECORDS: That the mine inspector shall distribute blank forms, requiring statistics of accidents, labor and production or such other information as the Governor may require, which shall be filled in and returned to the mine inspector's office, to be made and used under the same conditions and restrictions as now required by the U. S. Geological Survey and the U. S. Bureau of Mines, by the persons in charge of mines or mine workings, on or before the 31st day of December each year.

Sanitation.

“Section 11. SANITATION: That in any working mine, the inspector may require a sufficient number of portable, water-tight privies to be provided for the underground employees, such privies to be taken to the surface and cleaned every twenty-four hours.

Guards for dangerous machinery.

“Section 12. GUARDS FOR DANGEROUS MACHINERY: That any owner, lessee, agent, operator, manager or superintendent of any mine, mill, tunnel, shaft, quarry or metallurgical works, wherein laborers are employed, or machinery used, shall provide and maintain reasonable safe-guards for all cogs, gearing, belting, shafting, couplings, set-screws, conveyors, vats, rolls, and machinery of other or similar description, which it is practicable to guard, and which can be effectively guarded with due regard to the ordinary use of such machinery and appliances and to the employees therefrom, and with which the employees of any such mine, mill, tunnel, shaft, quarry, dredge, or metallurgical works are to come in contact while in the performance of their duties; and if

any machinery or any part thereof, is in a defective condition and its operation would be extra hazardous because of such defect, or if any machinery is not safe-guarded as provided for in this Act, the use thereof is prohibited, and a notice to that effect shall be attached thereto by the employer immediately upon receiving notice of such defect or lack of safe-guard, and such notice shall not be removed until such defect has been remedied or machine safe-guarded as herein provided.

“Section 13. SAFETY OF SHAFTS:

Safety of shafts.

(a) That when any shaft is sunk on any vein or ore chute, or body of ore, or any shaft sunk for the purpose of mining ore, a pillar of ground shall be left standing on each side of the shaft, of sufficient dimensions to protect and secure the same, and in no case shall stoping be permitted up to or within such proximity to the shaft as to render the same insecure, until such time as the shaft is to be abandoned, when said pillar may be withdrawn.

(b) All abandoned mine-shafts, pits, or other excavations, endangering the life of man or beast, shall be securely covered or fenced.

“Section 14. LADDERWAYS: That every shaft, Ladderways. winze, raise or incline of steeper slope than forty degrees from the horizontal, and deeper than forty feet, through which men are obliged to travel, shall be provided with a ladderway. Suitable ladders, or footways, shall be provided to connect floors or sets in stopes and other places requiring communication in mines. Every mine shall have in addition to any mechanical means of ingress or egress, at least one proper ladder or footway communicating from the lowest workings of the mine to the surface.

That permanent ladderways, used for ascent or descent of persons in the mine, shall be sufficiently strong for the purpose demanded, and shall be firmly fastened and kept in good repair. In a vertical shaft, the mine inspector may, at his discretion, by an order in writing, direct that the ladder shall be inclined at the most con-

venient angle which the space in which the ladder is fixed allows, and every such ladder shall have a platform at intervals of not more than fifty (50) nor less than twenty (20) feet. The said platforms shall be closely covered, with the exception of any opening large enough to permit the passage of a man, and shall be so arranged that by no means could a person fall from one ladder, through the opening to the next ladder. This shall not apply to placer mines.

Passageways
around shafts,
guard rails for
shaft stations,
etc.

“Section 15. PASSAGEWAYS AROUND SHAFTS, GUARD RAILS FOR SHAFT STATIONS, ETC.: That all stations or levels shall have a passageway around the working shaft so that crossing over the hoisting compartments may be avoided. All sumps shall be securely planked over. At all shaft stations a gate or guard rail must be provided and kept in place across the shaft, except when cage, skip or bucket is being loaded; but this prohibition shall not forbid the temporary removal of the gate or rail for the purpose of repairs or other operations, if the proper precautions to prevent danger to persons, are taken. This shall not apply to underground placer mining.

Hoisting of
men or mater-
ials.
Hoisting engi-
neers.

“Section 16. HOISTING OF MEN OR MATERIALS:
(a) HOISTING ENGINEERS: That no person ad-
dicted to the use of intoxicating liquors or drugs, or under
the age of eighteen years, shall be employed as a hoisting
engineer.

Hoisting ma-
chinery.

(b) HOISTING MACHINERY: That all hoisting ma-
chinery, using steam, electricity, air, gasoline, or
hydraulic motive power, for the purpose of hoisting from,
or lowering into, mines of employees and materials, ex-
cept shafts not exceeding three hundred (300) feet in
depth, shall be equipped with an indicator, said indicator
to be placed near to, and in clear view or hearing of, the
engineer. This indicator must be in addition to the marks
on the rope, cable or drum.

Rate of hoist-
ing speed.

(c) RATE OF HOISTING SPEED: That it shall be
unlawful to hoist men out of, or lower men into a mine at

a speed greater than eight hundred (800) feet per minute. When in running his engine at a speed greater than eight hundred (800) feet per minute, an engineer violates the express order of his employers, he, the engineer, shall be subject to the penalty herein provided.

(d) **ROPES OR CABLES USED FOR HOISTING:** Ropes or cables used for hoisting. That all ropes or cables used for hoisting purposes shall be of approved quality and manufacture; provided, that in shafts and winzes of over two hundred (200) feet in depth, only wire ropes or cables shall be used for hoisting purposes.

(e) **CONSTRUCTION OF HEAD FRAMES:** Construction of head frames. That all head-frames, where men are hoisted, in places where more than twenty-five (25) men are employed, shall be so constructed as to allow at least twenty-five (25) feet above the hoist landing stage, in which the cage, skip or bucket can travel freely in case of an over-wind. The mine inspector may grant permission for the use of any head frame, erected previous to the enactment of this law, which does not comply with the above conditions. This shall not apply to placer mines.

(f) **SAFETY CAGES:** Safety Cages. That it shall be unlawful for the operator of any mine to permit the hoisting or lowering of men in any shaft, deeper than three hundred (300) feet, unless an iron-bonneted safety cage, equipped with gates or doors, of sufficient size and strength to prevent a man falling onto the timbers, be used; provided, however, that this provision shall not apply to shafts in the process of sinking. Every cage must have overhead bars of such arrangement as to give every man on the cage an easy and secure handhold. Every cage or skip used for hoisting men must be provided with a safety catch or catches of sufficient strength to hold the cage or skip with its maximum load at any point in the shaft in the event that the hoisting cable should break. The inspector must see that all cages and skips are equipped in compliance with this paragraph, and that on all cages the

safety catches are kept well oiled and in good working condition.

Hoisting buckets, guides and cross heads.

(g) **HOISTING BUCKETS, GUIDES AND CROSS HEADS:** That all vertical shafts, more than two hundred (200) feet in depth, from which hoisting of men is done by means of buckets, must be provided with suitable guides, and in connection with the bucket there must be a cross-head traveling upon these guides. The height of the cross-head shall be at least one and one-half times its width. If the cross-head be a type that is not secured to the hoisting rope, a stopper of a design approved by the mine inspector must be securely and rigidly fastened to the hoisting rope at a suitable point above the rim of the bucket.

Persons riding in cages or buckets.

(h) **PERSONS RIDING IN CAGES OR BUCKETS:** That the number of persons permitted to ride on the deck of a cage, in or on a skip or bucket, shall be determined by the mine inspector, and in no case shall more than the number of men permitted by the mine inspector be allowed to ride on the deck of such cage, or in or on such bucket or skip. No person shall ride on a cage or in or on a skip or bucket when loaded with rock or ore, unless the owner or operator of the mine shall have provided double deck cages, in which case the employees may be permitted to ride upon the deck not occupied by such tools, timbers or other materials.

Riding on loaded cage.

(i) **RIDING ON LOADED CAGE:** That no person shall ride upon any cage, skip or bucket, that is loaded with tools, timber, powder, or other material, except for the purpose of assisting in passing these through the shaft.

Lowering cage to bottom of shaft.

(j) **LOWERING CAGE TO BOTTOM OF SHAFT:** That in no case shall a cage, skip or bucket, or other vehicle, be lowered directly to the bottom of a shaft, when men are working there, but must be stopped at least fifteen (15) feet above the bottom until the signal to lower further is given by one of the men at the bottom of the

shaft; provided, however, that this section shall not apply to shafts less than fifty (50) feet in depth.

(k) PROTECTION FROM FALLING MATERIAL IN SHAFT: That persons engaged in deepening a shaft, in which regular hoisting from any upper level is going on, shall be protected from the danger of falling material by a suitable covering, sufficient opening in the covering being left only for the passage of the bucket or other conveyance used in sinking operations.

Protection from falling material in shaft.

(l) BULKHEADS BETWEEN TWO WORKING CREWS: That in shafts, winzes or raises, where two or more crews of men are working, one crew above another, there shall be a bulkhead between the two crews of men, strong enough to stop any tools, or other material that may fall from the men working above, and only the cage, skip or bucket compartment be left open.

Bulkheads between two working crews.

(m) PLUGS FOR WINDLASSES: That windlasses and whims in use in mines shall be provided with suitable plugs or other reliable devices to prevent running back of the bucket or other conveyance used.

Plugs for windlasses.

(n) HOOKS FOR BUCKETS: That no open hooks shall be used with buckets when hoisting, but some form of safety or shackle hook, approved by the mine inspector.

Hooks for buckets.

(o) HOISTMEN: At any mine, where men are hoisted by mechanical means, a hoistman, charged with the care of such hoist, shall be kept on duty thereat at all times when men are underground and he shall be charged with the actual hoisting of the men.

Hoistmen.

“Section 17. MINE OUTLETS:

Mine outlets.

(a) DIVIDED SHAFTS: That at every mine where a single shaft affords the means of ingress and egress to the persons employed underground, such shaft, if more than three hundred (300) feet deep, shall be divided into at least two compartments, and one of the compartments shall be set aside for a ladderway, which must be equipped as hereinbefore provided. Whenever such single shaft shall be covered by a building, not absolutely fire-proof, the ladderway shall be securely bulkheaded at a

Divided shafts.

point at least twenty-five feet below the collar of the shaft, and below this bulkhead, if the shaft is situated on a hillside, a drift shall be driven to the surface; if the shaft is situated in a level country, the drift shall be driven to a safe distance beyond the walls of the building, but in no case less than thirty (30) feet, and from there a raise shall be made to the surface. This raise shall be equipped with ladderways, and it, together with the drift connecting with the main shaft, shall be kept in good repairs and shall afford a safe escape in case of fire.

Fireproof door near mouth of adit.

(b) FIREPROOF DOORS NEAR MOUTH OF ADIT: That every adit, on which the mouth is covered by a house or building of any kind, shall be provided with a fire-proof door, near the mouth of the adit, that can be closed from the outside of the building by means of a pull wire or cable, so as to keep the gases or combustion from entering the mine in the event that fire destroys the building at the mouth of the adit.

Covering for sumps and other openings.

(c) COVERING FOR SUMPS AND OTHER OPENINGS: That existing winzes, sumps, and all other openings in the floor of a drift or stope must be kept covered by a substantial hatch, or planking, or provided with guard-rails.

Stationary lights to be provided.

“Section 18. STATIONARY LIGHTS:

(a) STATIONARY LIGHTS TO BE PROVIDED: That lights shall be provided during working hours at all stations in vertical and incline shafts during the time while in actual use; and also at all stations in levels where hoisting or hauling is affected by machinery; and also at night at all working places on the surface.

No candles to be left burning.

(b) NO CANDLES TO BE LEFT BURNING: That no candles shall be left burning in a mine, or any part of a mine, when the person using the candle departs from his work for the day.

Accumulation of water.

“Section 19. ACCUMULATION OF WATER:

(a) That when advancing a drift, adit, level or incline toward a working suspected to be filled with water, a bore hole must be kept at least ten feet in advance of the

breast of the drive; and also, if necessary, in directions laterally from the course of the drive. Such additional precautionary measures shall be taken as may be deemed necessary by the mine inspector, to obviate the danger of a sudden breaking through of water.

(b) That no raise shall be allowed to approach within ten feet of any portion of a winz, or a stope, in which there is a dangerous accumulation of water.

(c) That in every mine where, in the opinion of the mine inspector, there is danger of a sudden inrush of water, such additional raises, drifts, or other workings shall be constructed as are necessary to insure the escape of workmen from the lower workings; and all sumps and places for the storage of water in mines, shall be so constructed as to prevent leakage, as far as possible, and insure the safety of the men working below the same.

(d) That it shall be unlawful for any operator to impound water within any mine, in which men are working below the water so impounded, in such a manner as to endanger the safety of such men, unless such water be impounded by a dam or dams, or wall or walls, approved by the mine inspector.

“Section 20. MINORS NOT TO BE EMPLOYED: That boys under the age of sixteen years shall not be employed underground in a mine. Minors not to be employed.

“Section 21. INTOXICATED PERSONS NOT ALLOWED IN MINES: That no intoxicated person shall be allowed to enter a mine. Nor shall any intoxicated person be allowed to remain in any mine. Nor shall any intoxicating liquors be taken, or allowed to be taken, into any mine. Intoxicated persons not allowed in mines.

“Section 22. VISITORS: That strangers and visitors shall not be allowed underground in any mine, unless accompanied by the owner, official or employee deputized to accompany them. Visitors.

“Section 23. VENTILATIONS: An adequate amount of ventilation shall at all times be produced so that all mine workings and the roads to and from such workings Ventilation.

shall be free from any offensive gases. The air must be in such a state that a light will burn freely at all times in any working portion of the mine. That all old timbers shall be, as soon as practicable, taken from the mine, and shall not be piled up and permitted to decay underground.

Signal system. "Section 24. SIGNAL SYSTEM:

(a) That each mine shall adopt its own set of station signals, and that such station signals shall be given before the hoist or lower signals provided herein; that the engineer shall not move the cage, skip or bucket unless he understands the signal.

(b) That the official code of signals herein provided for, and the station signals adopted or to be adopted by each mine, shall be posted at all hoist engines, in plain sight of engineer, at the collar of each shaft, and at every station—the letters or figures thereon to be not less than one-half inch in height.

Code of Signals.

"Section 25. CODE OF SIGNALS: That the following shall be the official code of signals for underground work throughout the Territory:

1 bell—Hoist.

1 bell—Stop, if in motion.

2 bells—Lower.

3 bells—Hoist men, run slow.

2 slow bells—Lower very slow.

3 slow bells—Hoist very slow.

4 bells—Blasting signal. This is a caution signal and, if the engineer is prepared to accept it, he must acknowledge by raising the bucket or cage a few feet, then lowering it again. After accepting this signal, an engineer must be prepared to hoist the men away from the blast as soon as the signal (1 bell) is given, and must accept no other signal in the meantime.

6 bells—Skip or cage call. To be followed by the station signal, when the skip or cage is desired.

9 bells—Danger signal. Followed by the station signal, calls cage to that station. This signal takes precedence over all others, except an accepted blast signal.

“Section 26. FIRST AID TO THE INJURED:

First aid to
the injured.

(a) That a supply of articles suitable for first aid treatment shall be kept at every mine, the list to include a book of instructions, antiseptic gauze, carbolated vaseline, carbolic acid, tablets of bi-chloride of mercury, linseed oil, bandages, soap, wash basin and towels or the equivalents.

(b) That at every mine or metallurgical works where there are poisonous gases or solutions, there shall be kept in a conspicuous place the proper antidotes, properly labeled, with the instructions for their use.

“Section 27. EXPLOSIVES:

Explosives.

(a) That no inexperienced man shall be allowed to use high explosives, except for the purposes of instruction, and then only under the supervision of a competent person.

(b) That no explosives shall be used in any mine, unless there is plainly printed or marked, on every original package containing such explosives, the name and place of business of the manufacturer and the strength and date of manufacture of such explosive.

(c) That no explosives shall be stored in any mine; provided, however, that this shall not be construed to prevent the operator of any mine from keeping sufficient explosives within such mines, as may be required within the next twenty-four hours.

(d) That such temporary supply shall not be kept in any place within such mine, where its accidental explosion would cut off the escape of the miners working therein.

(e) That no open lights shall be taken into the magazine or held where the spark could fall in the box, or on to the explosives.

(f) That no caps or oil shall be stored in any powder magazine.

(g) That all magazines shall be placed at a safe distance from the entrance to a mine or public highway.

(h) That no iron or steel tamping bars shall be used.

(i) That if after blasting and before work is resumed a charge is known to have missed fire or cut off, the same shall not be withdrawn, but shall be blasted, and that no drilling shall be done on the same working face where there is so known to be a missed or cut off hole containing explosives, until the same has been blasted, provided that where a missed or cut off hole is discovered in the face of a stope after blasting, no drilling shall be done within ten feet of said missed or cut off hole, but drilling may be done at a distance of ten feet or more from such missed or cut off hole.

(j) That a suitable house, in which to thaw explosives shall be built separate from the other mine buildings and shall be equipped with suitable apparatus for thawing explosives, approved by the mine inspector. The key or keys to such powder magazine shall be held by some competent person or persons who shall be responsible for the distribution of the powder, and shall be under the direction of the mine foreman or some other careful and experienced person. Whenever deemed necessary by the mine inspector, suitable apparatus for thawing explosives shall also be provided for use in the mine and shall be under the immediate charge of the mine foreman or some other careful and experienced person.

Machinery.

“Section 28. MACHINERY:

(a) That all boilers, used for the generation of steam, shall be equipped with a safety valve, water gauge and water glass, and shall be inspected at least once every year by a competent person and a written report of such inspection shall be kept, and such boilers shall be hydraulically tested, annually, to a pressure exceeding the working steam pressure by forty per cent.

(b) That all gears shall be covered or enclosed.

(c) That all exposed set-screws shall be countersunk or covered.

(d) That all belts, through which it is necessary for employees to travel, shall be suitably protected so as to comply with the provisions of Section 12.

(e) That all keys on shafting shall be covered or protected by railing.

(f) That shafting in exposed places shall be protected by railing or housed.

(g) That hoisting engines shall be equipped with brakes of sufficient strength to hold the loaded cage or skip at any point in the shaft.

(h) That all hoists shall be equipped with efficient indicators.

(i) That hoisting ropes shall have at least three turns around the drum when the cage or skip is at the lowest point in the shaft.

(j) That no ropes shall be used for hoisting men, when ten per cent of the wires in any running foot are broken.

(k) That hoisting ropes shall have a factor of safety not less than five, to be calculated by dividing the breaking strength as published in the manufacturer's tables by the sum of the maximum load to be hoisted, plus the weight of the rope, plus ten per cent of such values, to take into account the shock of striking and of starting and stopping.

(l) That haulage locomotives shall be equipped with gongs or whistles.

"Section 29. LAWS TO BE ACCESSIBLE: That it ^{Laws to be accessible.} shall be the duty of the superintendent of any mine, within the provisions of this Act, to keep at all times, in the office of said mine, and in the timekeeper's office thereof, in an accessible place and subject to inspection by all workmen and persons interested in the same at least one printed copy of this Act.

Whenever the approval, order or direction of the mine inspector is provided for or contemplated in this Act, the same shall be in writing and signed by the mine inspector, and a duplicate of the same delivered to the person or corporation operating said mine; and wherever any apparatus is now installed in any of said mines or workings and the approval of the mine inspector is contemplated

or provided for in this Act, the said approval shall not be construed or deemed necessary until after such mines shall have actually been inspected by such mine inspector and until a written order or approval or disapproval shall have been signed by the mine inspector and a copy thereof delivered to the owners or operators of the mine.

Penalty for violations.

“Section 30. PENALTY FOR VIOLATIONS: Any persons or corporations failing to comply with any of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not less than fifty (\$50.00) dollars, nor more than one thousand (\$1000.00) dollars, or be imprisoned in the federal jail for a period of not less than thirty (30) days, nor more than one (1) year, or punished by both such fine and imprisonment, at the discretion of the Court.”

Repealing clause.

Section 5. All Acts and parts of Acts, inconsistent or in conflict with the provisions of this Act, are hereby repealed.

Approved, April 29, 1915.

CHAPTER 70.

AN ACT

[S. B. 30.]

To amend Section 162, Chapter 10, Title IV of the Compiled Laws of the Territory of Alaska, relating to annual assessment work required to be done upon unpatented mining claims, and the filing of affidavits showing the performance of labor and making of improvements thereon.

Be It Enacted by the Legislature of the Territory of Alaska:

Sec. 162, Ch.
10, Title IV,
Compiled
Laws, amend-
ed.

Section 1. That that part or portion of said Section 162 reading as follows: “And upon failure of the locator or owner of such claim to comply with the provisions of this Act as to performance of work and improvements, such claim shall become forfeited and open to location by others as if no location of the same had been made,” be and the same hereby is, amended to read as follows: