

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Abnormal Operating Conditions" – *Environmental conditions that are unfavorable, harmful, or detrimental to or for the operation of a crane, such as excessively high or low ambient temperatures, exposure to adverse weather, corrosive fumes, dust-laden or moisture-laden atmospheres, and hazardous locations.*

"Access Platform" – *A limited length platform, located on the idler girder to access to the endtruck wheels only.*

"Adjustable or Variable Voltage" – *A method of Bridge Crane Control by which the motor supply voltage can be adjusted.*

"Ambient Temperature" – *The temperature of the atmosphere surrounding the hoist.*

"Ampacity" – *The current carrying capacity expressed in amperes.*

"ANSI" – *The American National Standards Institute.*

"Appointed" – *Assigned specific responsibilities by the employer or the employer's representative.*

"Auxiliary Hoist" – *A supplemental hoisting unit of lighter capacity and usually higher speed than provided for the main hoist.*

"Automatic Crane" – *A crane which when activated operates through a preset cycle or cycles.*

"Auxiliary Girder (outrigger) " – *An additional girder, either solid or latticed arranged parallel to the bridge girder(s) for supporting the foot-walk, Bridge Crane Control panels, operator's cab, etc., to reduce the torsional forces such loads might otherwise impose.*

"Axle, Fixed" – *A shaft which is fixed in the end truck and about which the wheel revolves.*

"Axle, Rotating" – *A shaft which is fixed in the wheel and which rotates on bearings fixed in the end truck.*

"B-10 Bearing Life" – *The B-10 bearing life of an anti-friction bearing is the minimum expected life, in hours, of 90~70 of a group of bearings which are operated at a given speed and loading.*

"Bearing Life" – *The L-10 life of an anti-friction bearing is the minimum expected life, hours, of 90 percent of a group of bearings which are operating-at a given speed and loading. The average expected life of the bearings is approximately five times the L-10 life.*

"Bearing, Lifetime Lubricated" – *An antifriction bearing which is provided with seals and a high-stability oxidation-resistant grease to permit operation of the bearing without re-lubrication for not less than the specified B-10 life.*

"Block, Load" – *The assembly of hook, swivel, bearings, sheaves, pins and frame suspended from the hoisting ropes. In a "short type" block, the hook and the sheaves are mounted on the same member,*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

called the swivel. In a "long type" block, the hook and the sheaves are mounted on separate members. (The supporting member for the sheaves is called the sheave pin and the supporting member for the hook is called the trunnion.)

"Block, Upper" – *A fixed assembly of sheaves, bearings, pins and frame, located on the trolley cross members, and which supports the load block and its load by means of the ropes.*

"Bogie" – *A short end truck attached to the end of one girder (or to a connecting member if more than one bogie is used per girder). This type of end truck is used when more than four wheels are required on a crane due to the design of the runway.*

"Boom (of gantry cranes) " – *An extension of the trolley runway that may be raised or retracted to obtain clearance for gantry travel.*

"Boom (of overhead cranes)" – *A horizontal member mounted on the trolley to permit hoisting and lowering the load at a point other than directly under the hoist, drum, or trolley.*

"Brake" – *A device used for retarding or stopping motion by friction or power means.*

"Branch Circuit" – *The circuit conductors between the final overcurrent device protecting the circuit and the outlet(s).*

"Bridge" – *The part of a crane consisting of girders, trucks, end ties, footwalks, and drive mechanism which carries the trolley or trolleys.*

"Bridge Conductors" – *The electrical conductors located along the bridge structure of a crane to provide power to the trolley.*

"Bridge Girder (crane girder) " – *The principal horizontal beams of the crane, on which carriers or trolleys travel, is supported by the end trucks, and is perpendicular to the runway.*

"Bridge Rail" – *The rail supported by the bridge girders on which the trolley travels.*

"Bridge Travel" – *The crane movement in a direction parallel to the crane runway.*

"Building Structure" – *The structural members of a building that support the building loads and on which the loads of crane or monorail equipment, and the material to be moved, will be imposed.*

"Bumper (buffer)" – *An energy absorbing device for reducing impact when a moving crane or trolley reaches the end of its permitted travel; or when two moving cranes or trolleys come in contact.*

"Cab" – *The operator's compartment on a crane.*

"Cab-Operated Crane" – *A crane controlled by an operator in a cab located on the bridge or trolley.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Camber" – *The slight upward vertical curve given to girders to compensate partially for deflection due to hook load and weight of the Crane.*

"Cantilever Gantry Crane" – *A gantry or semi-gantry crane in which the bridge girders or trusses extend transversely beyond the crane runway on one or both sides.*

"Capacity" – *The maximum rated load (in tons) which a crane is designed to handle.*

"Carrier" – *Please see "Trolley".*

"Chain, Hand" – *The chain grasped by the operator to apply force required for lifting, lowering, or traveling motions.*

"Chain, Load" – *The load-bearing chain in a hoist.*

"Chain Guide" – *A means to guide the load chain at the load sprocket.*

"Circuit Breaker" – *A device to open and close a circuit by non-automatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating.*

"Clearance" – *The distance from any part of the crane to a point of the nearest obstruction.*

"CMAA" – *Crane Manufacturers Association of America, Inc. (formerly EQOI—Electric Overhead Crane Institute).*

"Collectors" – *Contacting devices for collecting current from runway or bridge conductors.*

"Collector Shoe" – *The portion of a collector which makes contact by sliding on the conductor bar.*

"Collector Wheel" – *The portion of a collector which makes contact by rolling on the conductor bar.*

"Conductors, Bridge" – *The electrical conductors located along the bridge structure of a crane to provide power to the trolley.*

"Conductors, Runway" – *The electrical conductors located along a crane runway to provide power to the crane.*

"Contactor" – *An electromechanical device for opening and closing an electric power circuit.*

"Control Braking Means" – *A method of controlling crane motor speed when in an overhauling condition.*

"Control Actuator, Bridge Crane" – *A manual means at the operating station by which hoist Bridge Crane Controls are energized.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Control Enclosure, Bridge Crane" – *The housing containing the electrical Bridge Crane Control component.*

"Control Voltage" – *The voltage impressed on the Bridge Crane Control devices.*

"Controller, Bridge Crane" – *A device for regulating in a pre-determined way the power delivered to the motor or other equipment.*

"Controller, Spring Return" – *A controller which when released will return automatically to a neutral position.*

"Countertorque" – *A method of control by which the power to the motor is reversed to develop torque in the opposite direction.*

"Couplings (splices)" – *Mechanical devices used to join the adjacent ends of track sections.*

"Cover Plate" – *The top or bottom plate of a box girder.*

"Crane" – *A machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes whether fixed or mobile are driven manually or by power.*

"Creep Speed" – *A very slow, constant, continuous, fixed rate of motion of the hoist, trolley, or bridge: usually Control established at 1% to 10% of the normal full load speed.*

"Cross Shaft" – *The shaft extending across the bridge, used to transmit torque from motor to bridge drive wheels.*

"Cushioned Start" – *An electrical or mechanical method for reducing the rate of acceleration of a travel motion.*

"Dead Loads" – *The loads on a structure that remain in a fixed position relative to the structure. On a crane bridge such loads include the girders, footwalk, cross shaft, drive units, panels, etc.*

"Deflection" – *Displacement due to bending or twisting in a vertical or lateral plane, caused by the imposed live and dead loads.*

"Designated" – *Selected or assigned by the employer or the employer's representative as being qualified to perform specific duties.*

"Diaphragm" – *A plate or partition between opposite parts of a member, serving a definite purpose in the structural design of the member.*

"Disconnecting Means" – *A device, or group of devices, or other means whereby the conductors of a circuit can be disconnected from their power source.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Double-Girder Crane" – A crane having two bridge girders mounted between and supported from the end trucks.

"Drag Brake" – A brake which provides retarding force without external control.

"Drift Point" – A point on a travel motion controller which releases the brake while the motor is not energized. This allows for coasting before the brake is set.

"Drive Girder" – The girder on which the bridge drive machinery is mounted.

"Driving Head" – A motor-driven carrier head which is supported from and propelled by the load bearing wheels.

"Drum" – The cylindrical member around which the ropes are wound for raising or lowering the load.

"Dynamic Brake" – A method of controlling crane motor speeds when in the overhauling condition to provide a retarding force.

"Eddy Current Brake" – A method of Bridge Crane controlling or reducing speed by means of an Bridge Crane Electrical induction load brake.

"Electric Baffle" – Conductors that are wired to cut off electric power to approaching motor-driven equipment if track switches, drop sections, and other movable track devices are not properly set for passage of equipment.

"Electrical Interlock" – An electrical device in the starter circuit which prevents a short circuit when opposite Bridge Crane Controls are operated at the same time.

"Electrification" – The track mounted conductor system by which the moving equipment receives its electrical power.

"Emergency Brake" – A method of decelerating a drive when power is not available. The braking effort may be established as a result of action by the operator, or automatically when power to the drive is interrupted.

"Emergency Stop Switch" – A manually or automatically operated electric switch to cut off electric power independently of the regular operating controls.

"Enclosed Conductor" – A conductor or group of conductors substantially enclosed to prevent accidental contact.

"Enclosure" – A housing to contain electrical components, usually specified by a NEMA classification number.

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"End Approach" – *The minimum horizontal distance, parallel to the runway, between the outermost extremities of the crane and the centerline of the hook.*

"End Stop" – *A device to limit travel of a trolley or crane bridge. This device normally is attached to a fixed structure and normally does not have energy absorbing ability.*

"End Tie" – *A structural member other than the end truck which connects the ends of the girders to maintain the squareness of the bridge.*

"End Truck" – *An assembly consisting of the frame and wheels which support the crane girder(s) and allow movement along the runway.*

"Equalizer" – *A device which compensates for unequal length or stretch of a rope.*

"Exposed" – *Capable of being contacted inadvertently. Applied to hazardous objects not adequately guarded or isolated.*

"Fail-Safe" – *A provision designed to automatically stop or safely control any motion in which a malfunction occurs.*

"Field Wiring" – *The wiring required after erection of the crane.*

"Fixed Transfer Section (also known as crossover)" – *On a monorail, a connecting track with an interlock mechanism on both ends, mounted between two interlocking cranes, used to transfer a carrier from one bridge to the other.*

"Fleet Angle" – *The angle formed by the wire rope and the drum groove or sheave groove in the plane which contains the wire rope and is parallel to the drum or sheave axis.*

"Floor-Operated Crane" – *A crane which is pendant or nonconductive rope controlled by an operator on the floor or an independent platform.*

"Footwalk" – *The walkway with handrail, attached to the bridge or trolley for access purposes.*

"Gantry Crane" – *A crane similar to an overhead crane except that the bridge for carrying the trolley or trolleys is rigidly supported on two or more legs running on fixed rails or other runway.*

"Gantry Leg" – *The structural member which supports a bridge girder or end tie from the sill.*

"Gauge" – *The center-to-center distance between the load carrying flanges of the two crane girders of a double girder crane.*

"Ground Fault" – *An accidental conducting connection between the electrical circuit or equipment and the earth or some conducting body that serves in place of the earth.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Hanger Rod" – *Steel rods which, together with other fittings, are used to suspend the track from the supporting structure.*

"Hazardous Locations" (classified) – *Regulatory Locations where fire or explosion hazards may exist. Locations are classified depending on the properties of the flammable vapors, liquids, or gases or combustible dusts or fibers which may be present and the likelihood that a flammable or combustible concentration or quantity is present. Class I locations: Locations in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. Class 2 locations: Locations that are hazardous because of the presence of combustible dust. Class 3 locations: Locations that are hazardous because of the presence of easily ignitable fibers or filings, but in which such fibers or filings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.*

"Headroom" – *The distance from the load point of the hook, at its upper most position, to the top of the hoist or crane.*

"Hoist" – *An apparatus which may be a part of a crane, exerting a force for lifting or lowering a freely suspended load.*

"Hoist Chain" – *The load bearing chain in a hoist.*

"Hoist Motion" – *That motion of a crane which raises and lowers a load.*

"Hoist Speed" – *The rate of motion that the load hook attains while lifting rated load.*

"Holding Brake" – *A brake that automatically prevents motion when power is off.*

"Hook Approach" – **The minimum horizontal distance between the center of the runway rail and the hook.**

"Hook Approach, End" – **The minimum horizontal distance, parallel to the runway, between the centerline of the hook(s) and the face of the wall (or columns) at the end of the building.**

"Hook Approach, Side" – **The minimum horizontal distance, perpendicular to the runway, between the centerline of a hook (main or auxiliary) and the centerline of the runway rail.**

"Hook Suspended" – **Suspension of hoist from a trolley or rigid structure by means of a hook(s) at top of hoist.**

"Hot Metal Handling Crane" – *An overhead crane used for transporting or pouring molten material.*

"Hydraulic Brake" – *A method of Bridge Crane controlling or reducing speed by means of displacement of a liquid.*

"Idle Sprocket" – *A freely rotating device that changes the direction of the load chain.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Idler Girder" – *The bridge girder that does not have the bridge drive attached, but which usually carries the bridge conductors.*

"Idler Sheave" – *A sheave used to equalize tension in opposite parts of a rope. Because of its slight movement, it is not termed a running sheave.*

"Impact Allowance" – *See Impact Factor.*

"Impact Factor" – *Additional hook load assumed to result from the dynamic effect of the live load.*

"Inch (inching) " – *See “jog”. Often used incorrectly to refer to “creep speed”.*

"Insulation Class" – *Motor winding insulation rating which indicates its ability to withstand heat and moisture.*

"Interlock Mechanism" – *A mechanical device to lock together the adjacent ends of two cranes or a crane to a crossover or spur track to permit the transfer of carriers from one crane or track to the other.*

"Interlocking Crane" – *A crane with an interlock mechanism on one or both ends enabling it to be mechanically locked to another crane, crossover, or spur track for the purpose of transferring a carrier from one to another.*

"Inverter (Variable Frequency Drive) " – *A method of Bridge Crane Control by which the fixed line voltage and frequency is changed to a three-phase system with infinitely variable voltage and frequency.*

"Jib Boom" – *A horizontal cantilever track for supporting the trolley (carrier).*

"Jog (inch) " – *To move the hook, trolley, or bridge in a series of short, discontinuous, increments by momentary operation of a Bridge Crane Controller.*

"KSI" – *Kips per square inch, measurement of stress intensity.*

"Kip" – *A unit of force, equivalent to 1000 pounds.*

"Knee Brace" – *The diagonal structural member joining the building column and roof truss.*

"Latch, Hook" – *A device used to bridge the throat opening of a hook.*

"Lateral Forces" – *Horizontal forces perpendicular to the axis of the member being considered.*

"Lateral Hook Travel" – *The lateral movement of the load hook between its position at the upper limit of travel and its position at the lower limit of travel.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Left-hand End" – A reference to parts or dimensions on the viewer's left of the centerline of span, established when facing the drive girder side of the crane.

"Lift" - The maximum vertical distance through which the load hook can travel, and the total allowable hook movement between its upper limit of travel and its position when at the lower limit of travel

"Lift Cycle" – Single lifting and lowering motion (with or without load).

"Lift Limiting Device" – An electrical, mechanical, or electromechanical device for limiting the upward or downward travel of the load hook at the extremities of lift. This device may limit lift at any point within the extremities of lift, if designed to be adjustable.

"Limit Switch" – A switch which is operated by some part or motion of a power-driven machine or equipment to alter the electric circuit associated with the machine or equipment.

"Load" – The total superimposed weight on the load block or hook.

"Load Block" – The assembly of hook or shackle, swivel, bearing, sheaves, pins, and frame suspended by the hoisting rope.

"Load Sprocket" – A hoist component that transmits motion to the load chain. This component is sometimes called load wheel, load sheave, pocket wheel, or chain wheel.

"Magnet" – An electromagnetic device carried on a crane hook to pick up loads magnetically.

"Magnetic Contactor" – An electro-magnetic device for opening and closing an electric power circuit.

"Main Hoist" – The primary hoist mechanism provided for lifting and lowering the rated load of the crane.

"Main Switch (Crane Disconnect)" – A switch on the crane bridge controlling the main power supply from the runway conductors.

"Man Trolley" – A trolley having an operator's cab attached thereto.

"Manually Operated Crane" – A crane whose hoist mechanism is driven by pulling an endless chain, or whose travel mechanism is driven in the same manner or by manually moving the load or hook.

"Master Switch" – A switch which dominates the operation of contactors, relays, or other remotely operated devices.

"Mechanical Brake" – A method of speed control by friction.

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Mechanical Load Brake" – *An automatic type of friction brake used for Bridge Crane controlling loads in a lowering direction. This unidirectional device requires torque from the motor or hand chain wheel to lower a load but does not impose any additional load on the motor or hand chain wheel when lifting a load.*

"Overhead Crane" – *A crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.*

"Parts (Lines) " – *Number of lines of rope supporting the load block or hook.*

"Patented Track" – *A generic term referring to crane and monorail equipment built in accordance with the MMA specification utilizing a composite track section incorporating a proprietary bottom flange shape.*

"Pawl" – *A device for holding the machinery against undesired rotation by engaging a ratchet.*

"Pendant Pushbutton Station" – *Means suspended from the crane operating the Bridge Crane Controllers from the floor or other level beneath the crane.*

"Pitch Diameter" – *Distance of the diameter of a drum or sheave from center to center of a rope passed about the periphery.*

"Plain Reversing Bridge Crane Control" – *A reversing Bridge Crane Control which has identical characteristics for both directions of motor rotation.*

Plugging – *A Bridge Crane Control function which accomplishes braking by reversing the motor line voltage polarity or phase sequence.*

"Plugging Relay" – *A current relay used on a bridge or trolley Bridge Crane Control panel which senses current in the motor secondary circuit of an alternating current motor and limits reverse torque of the motor to the first Bridge Crane Control point until the motor rotation has stopped (Sometimes called an anti-plugging relay.)*

"Pneumatic Brake" – *A method of Bridge Crane Controlling or powering a drive or brake by means of compressed gas.*

"Power-Operated Crane" – *A crane whose mechanism is driven by electric, air, hydraulic, or internal combustion means.*

"Primary Upper Limit Device" – *the first device that, when actuated, limits hoisting motion in the upward direction.*

"Protective Panel" – *An assembly containing overload and undervoltage protection for all crane motions.*

"Pulpit-Operated Crane" – *A crane operated from a fixed operator station not attached to the crane.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Rail Sweep" – *A device attached to the crane and located in front of the crane's leading wheels to push aside loose obstructions.*

"Rail, Bridge" – *The track supported by the bridge girder(s), on which the trolley travels.*

"Rail, Runway" – *The track supported by the runway beams, on which the crane travels.*

"Rated Load" – *The maximum load for which a crane or individual hoist is designed and built by the manufacturer and shown on the equipment nameplate(s).*

"Reach" – *Is equal to lift plus headroom.*

"Reeving" – *The reeving of the hoist is the path of the rope between the hoist and the load block*

"Regenerative Brake" – *A form of dynamic braking in which the electrical energy generated is fed back into the power system.*

"Regulated Speed" – *A function which tends to maintain constant motor speed for any load for a given speed setting of the Bridge Crane Controller.*

"Remote-Operated Crane" – *A crane controlled by an operator not in a pulpit or in the cab attached to the crane, by any method other than pendant or rope control.*

"Right-hand End" – *A reference to parts or dimensions on the viewer's right of the centerline of span, established when facing the drive girder side of the crane*

"Rope" – *Refers to wire rope, unless otherwise specified.*

"Rotary Switch" – *On a monorail, a track switch with a movable inner frame containing straight and/or curve sections of track. The inner frame can be rotated around a vertical axis to align these tracks with other tracks for routing carriers from one track to another.*

"Running Sheave" – *A sheave which rotates as the load block is raised or lowered.*

"Runway" – *An assembly of rails, beams, girders, brackets, and framework on which the crane or trolley travels.*

"Runway Disconnect Switch" – *A switch, usually at floor level, controlling the main power supply to the runway conductors.*

"Runway Girder" – *A horizontal beam attached to the building columns or wall, and supporting a runway rail on which the crane travels.*

"Runway Rail" – *The rail supported by the runway beams on which the bridge travels.*

"S Section" – *A standard beam shape as defined by the American Institute of Steel Construction.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Safety Lug" – A mechanical device fixed securely to the end truck or trolley yoke which will limit the fall of the crane or carrier in case of wheel or axle failure.

"Service Platform" – A means provided for workers to perform maintenance, inspections, adjustments, and repairs of cranes

"Sheave" – A grooved wheel or pulley used with a rope or chain to change direction and point of application of a pulling force.

"Semi-gantry Crane" – A gantry crane with one end of the bridge rigidly supported on one or more legs that run on a fixed rail or runway, the other end of the bridge being supported by a truck running on an elevated rail or runway.

"Side pull" – That portion of the hoist pull acting horizontally when the hoist lines are not operated vertically.

"Simple Beam" – A structural member supported and unrestrained at each end and subjected to loads acting transversely to its longitudinal axis.

"Single-Girder Crane" – A crane having one bridge girder mounted between, and supported from, the end trucks.

"Skewing Forces" – Lateral forces on the bridge truck wheels caused by the bridge girders not running perpendicular to the runways. Some normal skewing occurs in all bridges.

"Storage Bridge Crane" – A gantry type crane of long span usually used for bulk storage of material; the bridge girders or trusses are rigidly or non-rigidly supported on one or more legs. It may have one or more fixed or hinged cantilever ends.

"Span" – The horizontal distance center to center of runway rails.

"Splice" – A mechanical device used to join the adjacent ends of track sections.

"Spring Return" – A device used on a manual Bridge Crane Controller, master switch, or pushbutton to cause the unit to return automatically to the neutral position, when released by the operator.

"Standby Crane" – A crane which is not in regular service but which is used occasionally or intermittently as required.

"Standby Equipment" – Equipment that is not in regular service but which is used occasionally or intermittently as required.

"Static Bridge Crane Control" – A method of switching electrical circuits without the use of contacts.

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Stop" – A device to limit travel of a trolley or crane bridge. This device normally is attached to a fixed structure and normally does not have energy absorbing ability.

"Strength, Average Ultimate" – The average tensile force per unit of cross sectional area required to rupture the material as determined by test.

"Stress" – Load or force per unit area tending to deform the material usually expressed in pound per square inch.

"Stripper" – A device that aids the load chain in leaving the load sprocket.

"Structural Supports" – Structural members provided for the support of runways or monorail track and switches.

"Supporting Structure" – The structure used for the support of a monorail or crane system.

"Suspension Fittings" – Fittings used to attach the track to the supporting structure.

"Sweep" – Maximum lateral deviation from straightness of a structural member, measured at right angles to the Y-Y axis.

"Switch" – A device for making, breaking, or for changing the connections in an electric circuit.

"Tagline" – An electrical conductor system employing flexible cables.

"TENC" – Totally enclosed fan cooled

"TENV" – Totally enclosed non-ventilated.

"Tongue Switch" – On a monorail, a track switch containing one straight section of track, pivoted at one end, which can be swung to various positions to connect with fixed tracks for routing of carriers.

"Top Running Crane" – An electric overhead traveling crane having the end trucks supported on rails attached to the top of the crane runway.

"Torque, Full Load (motor) " – The torque produced by a motor operating at its rated horsepower and speed.

"Torque, Locked Rotor" – The minimum torque which a squirrel-cage motor will develop at rest, for all angular positions of the rotor, with rated voltage applied at rated frequency. Not applicable to wound-rotor (slipring) motors.

"Torque, Motor Breakdown" – The maximum torque which a squirrel-cage or wound-rotor (slipring) motor will develop with rated voltage applied at rated frequency, without an abrupt drop in speed.

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Torque, Motor Full Load" – *The torque developed by an electric motor (A.C. or D.C.) to produce its rated horsepower at rated full load speed.*

"Torque, Motor Pull Up" – *The minimum torque developed by a squirrel cage or wound rotor (slip-ring) motor during the period of acceleration from rest to the speed at which breakdown torque occurs. For squirrel cage motors with 8% or greater slip, the pull up torque, the breakdown torque, and the starting torque are all equal and occur at zero speed.*

"Torsional Box Girder" – *Girder in which the trolley rail is located over one web.*

"Torsional Forces" – *Forces which can cause twisting of a member.*

"Track Capacity" – *The design load which consists of the rated load, impact allowance and load imposed by the weight of the equipment.*

"Track Switch" – *On a monorail, a device with a moving section of track that can be moved to permit passage of a carrier from incoming fixed track(s) to outgoing fixed track(s).*

"Tractor Drive" – *A motor-driven unit supported from wheels and propelled by drive wheel or wheels bearing on the underside of the track.*

"Trolley" – *The unit which travels on the bridge rails and carries the hoisting mechanism (also known as a "carrier").*

"Trolley Frame" – *The basic structure of the trolley on which are mounted the hoisting and traversing mechanisms.*

"Trolley Speed" – *Trolley speed is the rate of motion that a motor operated trolley (and hoist) attains while traveling along a beam.*

"Trolley Suspended" – *Suspension of hoist from a trolley. Hoist can be connected to trolley by hook, clevis, or lug suspension, or the hoist can be integral with trolley.*

"Trolley travel" – *The trolley movement at right angles to the crane runway.*

"Truck" – *The unit consisting of a frame, wheels, bearings, and axles which support the bridge girders or trolleys.*

"True Vertical Lift" – *In true vertical lift, the load hook travels in a true vertical path between the lower limit of lift and the upper limit of lift.*

"Turntable" – *On a monorail, a track device with a movable inner frame containing a straight section of track which can be rotated with a loaded carrier on it to align the section of track with other tracks for the transfer of carriers from one track to another.*

GLOSSARY OF HOIST AND CRANE RELATED TERMS

MCLAUGHLIN HOIST AND CRANE

"Two Blocking" – *Condition under which the load block or load suspended from the hook becomes jammed against the crane structure preventing further winding up of the hoist drum.*

"Under Running Crane" – *An electric overhead traveling crane having the end trucks supported on track attached to the bottom flanges of the beams; or supported on bottom flanges of beams. These beams make up the crane runway.*

"Undervoltage Protection" – *A device operative on the reduction or failure of voltage to cause and maintain the interruption of power in the main circuit.*

"Upper Block" – *A fixed block located on a trolley that, through a system of sheaves, bearings, pins, and frame, supports the load block and its load.*

"Variable Frequency" – *A method of Bridge Crane Control by which the motor supply voltage and frequency can be adjusted.*

"Voltage Drop" – *The loss of voltage in an electric conductor between supply tap and load tap.*

"W Section" – *A wide flange beam shape as defined by the American Institute of Steel Construction.*

"Wall Crane" – *A crane having a jib with or without trolley and supported from a side wall or line of columns of a building. It is a traveling type and operates on a runway attached to the side wall or columns.*

"Web Plate" – *The vertical plate connecting the upper and lower flanges or cover plates of a girder.*

"Wheel Load" – *The load without impact on any wheel with the trolley and lifted load (rated capacity) positioned on the bridge to give maximum loading.*

"Wheel Yoke" – *A frame on which a pair of carrier (trolley) wheels are mounted.*

"Wheelbase" – *Distance from center-to-center of outermost wheels.*