

## 100 OSHA INVESTIGATED OVERHEAD CRANE ACCIDENTS

### Accident 000800052 - Crane Operator Killed When Struck By Falling Girder

Employee #1, a crane operator, was using a 20-ton overhead crane to move a 24 ft steel girder. The crane was equipped with two hoists, one holding each end of the 1,800 lb girder. Employee #1 was standing underneath the crane and using a remote radio control to move it. One end of the girder slipped out of the chain sling and struck Employee #1. He was killed.

### Accident 014258487 - Employee Crushed and Killed By Overhead Crane

Employee #1 was using a remote-controlled overhead crane to move a stack of steel plates from a stockpile to a position where trucks were located. He became caught between the crane's lifting device with the load of steel and another stockpile of steel plates. Employee #1 was crushed and killed.

### Accident 170123947 - Employee Killed When Crushed Between Paper Rolls

An overhead crane was used to align a 16,000 lb full roll of paper with the drive mechanism. The crane overpowered the reel lock down system and caused the reel to eject from the saddle. Employee #1 became caught between the full roll of paper and a 2,600 lb empty paper reel. He suffered crushing injuries to his chest and was killed. The full reel had a worn journal that caused the misalignment with the drive mechanism.

### Accident 000700526 - Employee Killed While Testing Overhead Crane

Employee #1 was performing operational/start-up testing and inspection on a rebuilt overhead crane. He continued to work alone after coworkers left the site. The next morning, Employee #1 was found dead on the crane catwalk. He died as a result of a head injury.

### Accident 170388458 - Employee Killed When Crushed By Overhead Load

Employee #1 was on the floor using a 32-ton remote-controlled Zenak overhead crane to move approximately 70 in. long rolls of coiled steel, each weighing 40,000 lb. He was standing with his back to a 56 in. tall work platform when the back of the hook supporting the load hit the platform. The load rotated and crushed Employee #1 against the platform. He was killed. The remote control had a switch on the side that had to be held in to function properly. **At the time of the accident, the button was being held in only by a rubber band. In addition, Employee #1's training had not been performed according to the employer's guidelines.**

### Accident 171055262 - Employee Killed When Run Over By Cab of Bridge Crane

Employee #1 went onto the cab access landing of a traveling bridge crane. The crane was being operated by a remote control device, and the operator could not see Employee #1. The crane's movement warning horn was sounded but Employee #1 could not get clear in time. He became caught between the bottom of the cab of the crane and the railing and was run over by the cab. Employee #1 died in the hospital six days later.

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### **Accident 171055205 - Employee Killed in Fall From Overhead Crane Rail**

Employee #1 was using a grizzly bar to pry up the railing of an overhead crane when he lost his balance and fell 27 ft. He was killed. Employee #1 was wearing a harness and lanyard, but was not tied off.

### **Accident 201750189 - Employee Killed When Struck By Falling Iron Casting**

Employee #1 was using a 2-ton overhead air hoist to position a 2,022 lb iron casting. The casting came off the sling hooks and landed on him. Employee #1 was killed.

### **Accident 170382444 - Employee's Leg Fractured in Fall From Column Ladder**

On April 18, 1997, Employee #1 was working on the north bridge at the east end of the Fabrication Shop Building at the Visco Steel facility, a fabricator of structural steel products. He was directed by his supervisor to check out a noise coming from a drive unit on bridge crane #2, one of the four 5-ton, pendant-controlled, Frontier overhead bridge cranes at the site. Employee #1 had climbed a 20 ft column ladder to access the drive motor when crane #3, operating on the south bridge, moved into his work area. Employee #1 fell approximately 18 ft to the floor and suffered a broken left femur and head injuries. He was transported to Loma Linda University Medical Center, where he was admitted for treatment. Employee #1 was not wearing fall protection (a safety belt and lanyard) despite the work elevation; the column ladder he was standing on was not built to T8CCR standards; and Employee #1 did not take proper precautions to prevent other cranes from entering his work area prior to starting work on the overhead bridge crane. The employer was cited for serious, accident-related violations of T8CCR 3210(a), employee not protected by guardrails or safety belt and lanyard; T8CCR 3277(e)(4) column ladder rungs less than 7 in. from the back of the column; and T8CCR 5034(b)(4), before work is started on cranes, precautions shall be taken, and warnings and barriers shall be in place. A general violation was also issued for T8CCR 5021(a)(2), employer could not provide current certification documents for the cranes in use.

### **Accident 200120103 - Employee's Leg Injured in Fall Into Furnace Floor Opening**

Employee #1 and a coworker were positioning a 33 in. by 36 in. by 7 in. deep rectangular dross pan on the pouring platform next to the electric induction furnace opening. The pan was suspended by a three-legged chain sling from an underhung crane. The crane bridge stop would not permit the pan to be centered vertically to the desired location on the pouring platform for Employee #1 to skim off the dross. As a result, he pulled on the chain sling while his coworker positioned 55 in. below on the floor, pushed the sling with one hand and operated the crane pendant control with the other. The dross pan twisted, and Employee #1 lost his balance. He either stepped or slipped into the 18 in. diameter floor furnace opening above the molten bronze, which was at a temperature of approximately 2,400 degrees F. Employee #1 sustained second- and third-degree burns to his left leg below the knee. The regular overhead crane permitted the desired vertical positioning by allowing an additional 18 in. of horizontal travel. At the time of the

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accident, it was down for repairs. No violations were addressable because minimal side pull and swinging is tolerable for monorails and underhung cranes.

### **Accident 170571186 - Employee's Leg Caught Between Trolley and Bridge Motor**

Employee #1 was repairing an overhead crane, which was part of his normal job responsibilities. He was working from the bridge of the crane when a coworker accidentally bumped the trolley control lever, causing the trolley to move. Employee #1 sustained bruises to his right leg when it became caught between the trolley and the bridge motor.

### **Accident 201270238 - Employee Killed When Crushed By Casting**

Employee #1, a machine operator, was standing on a tabletop to attach an overhead crane chain. He directed a coworker to energize the spindle top to rotate the machine part. When the machine energized, he was thrown to the floor and the casting fell on top of him. Employee #1 was killed.

### **Accident 200540086 - Employee Killed in Fall From Crane Runway**

Employee #1 was helping to remove old crane rails and install new ones when a section of crane rail struck his leg. He fell 30 ft from the crane runway and was killed. Employee #1 was not tied off.

### **Accident 170588065 - Employee's Foot Injured When Struck By Falling Metal Plate**

At approximately 1:40 a.m. on November 13, 1996, Employee #1 was repairing the metal floor of a large scraper/earth mover. The floor was being held up by an overhead crane that was hooked on an eye that had been welded on the metal floor (plate). Employee #1 was welding the metal floor when the eye broke off and the plate fell on his right foot. He suffered multiple broken bones.

### **Accident 171020688 - Employee Killed When Crushed By Falling Steel Plate**

Employee #1 was using a steel alloy chain sling connected to an overhead hoist to lift a steel plate. The plate became disengaged from the hooks on the chain and fell, crushing Employee #1. He was killed. The employer was cited for serious violations of T8CCR 4081, T8CCR 4921, T8CCR 4911(f), and T8CCR 4911(i).

### **Accident 201270253 - Employee Killed When Crushed Between Crane and Building**

Employee #1 was working on top of a 300-ton bridge crane when he was crushed between a wire rope support structure and a building support. Employee #1 was killed.

### **Accident 170632749 - Employee's Finger Amputated Between Hostler and Mobile Crane**

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Employee #1 worked for Parsec, Inc., a company with 2,300 employees who load and unload train cargo in containers known as IBCs. On September 21, 1996, he was assigned to remove the ties between two rail containers from the track. As was customary, he used a hostler tractor to get from one location to the other to complete the job more quickly. Employee #1 was removing the ties when he noticed a mobile overhead crane moving toward his parked yard tractor. He immediately went toward the crane but it did not stop until it hit the tractor. His left hand became caught between the wheel guard and the tractor, amputating his left index finger. The employer reported the accident to the Division on September 23, 1996, and an inspection and accident investigation was made on October 3, 1996. Violations were found in relation to the accident. The employer was cited for a serious violation of T8CCR 3203(a) for failure to provide (1) instruction, training, and enforcement in the proper procedure of removing and taking off IBC ties; (2) clear communication between the crane operator and ground man; and (3) appropriate training in stopping the crane and checking blind spots.

### **Accident 171017684 - Employee Injured When Struck By Falling Metal Frame**

Employee #1 was using a pendant control to retrieve an overhead crane. The pendant control allowed him to stack the crane's chain and unhook it from a large metal frame that it had just raised. As he was working, the metal frame began to teeter and it then fell. Employee #1 tried to scramble out of the way, but he was struck by the truss and suffered a fractured pelvis. The standard practice is to anchor the metal trusses using the overhead crane while securing the frames with large C-clamps and angle irons. Employee #1 could not verify that the metal frame had been clamped in place.

### **Accident 201360237 - Employee Killed When Struck By Straddle Crane**

On July 30, Employee #1 was working as a rigger for one of the production department's huge material handling travelift or straddle carrier cranes, which were used to move pre-stressed concrete beams from their pouring beds to the respective product storage yards. His duties required him to walk along beside his assigned crane to hook and unhook loads and to perform other tasks, as needed. On the day of the accident, Employee #1 was rigging for the operator of Mi-jack travelift crane #4. After retrieving the twenty 4-by-4s needed for cribbing on which to set the beams, the operator of crane #4 headed for the south storage yard. Employee #1 rode with him back to the east end of bed #5. At this point, Employee #1 climbed down and went to get something to drink. He told the operator he would meet him at the south product storage yard. Just before getting to the north end of the aisle at which crane #4 would turn, Employee #1 met the operator in the east-west road, south of bed #6. Employee #1 walked under the load, across the front of the travelift crane, and was just inside crane #4's right front tire as the operator began to make his left-hand turn into the south storage yard aisle. The crane #4 operator blew his horn and motioned for Employee #1 to get back out of the way. The operator said Employee #1 walked to his right, back across and in front of the right front tire and was continuing to walk outside the crane wheel toward the south. Meanwhile, the operator focused his attention on getting the giant crane centered in the north-south aisle. The next time the operator looked to his right (toward the west), he saw Employee #1's body lying

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crushed on the ground, in between the right front and rear wheels. He stopped the crane, left the engine running, and went to the office to alert the management.

### **Accident 200900033 - Employee Killed When Caught Between Box and Walkway**

At approximately 8:55 a.m. on June 7, 1996, Employee #1 was up on the walkway along the north side of the bridge of a 45-ton overhead, pendant-controlled, bridge crane. An electrical crew foreman who was at the pendant control moved the crane north by several feet. The lower portion of an open web steel roof truss caught Employee #1 across the lower back, pinning him against a controller box mounted along the south side of the walkway. The foreman climbed up to the walkway and halted the crane's movement. Employee #1 told him to move the crane, but the foreman said he couldn't and went for help. Employee #1 died within minutes, before rescuers arrived.

### **Accident 170571764 - Employee's Leg Amputated After Being Crushed By Steel Load**

Employee #1 was using a 10-ton overhead crane, serial #81240, to move pallets of coiled steel. He was lifting a 5,000 lb load of steel when it fell on his right lower leg. He suffered massive injuries to the leg, which had to be surgically amputated at the knee.

### **Accident 200200020 - Employee Killed in Fall From Crane Inspection Platform**

Employee #1 and a coworker were replacing the bolts in the rail system of an overhead crane. They were working off a manual 25 ft long by 4 ft wide crane inspection platform that was attached to the bottom of the crane rails. Approximately 3 ft of the platform extended out on one side of the crane rail where a guardrail could not be attached. Employee #1 moved around the crane railing to the outside of the work platform to loosen a tight bolt. He was using his body weight to gain leverage to loosen the bolt when it broke loose and he lost his balance. Employee #1 fell backward approximately 40 ft, striking some machinery when he landed on the floor. He was killed. No form of personal fall arrest system was being used.

### **Accident 014419345 - Employee Killed in Fall From Overhead Crane**

Employee #1 was performing maintenance work on a 25-ton Northern Engineering Corporation bridge crane when he stepped from the catwalk onto the trolley rail and fell off the inside portion of the rail. Employee #1 fell 23 ft 8 in., sustaining severe internal and head injuries that resulted in his death. Employee #1 was not wearing the provided fall protection equipment, as was required by his employer for any work involving heights.

### **Accident 170340707 - Employee Killed When Crushed By Steel Coil on Crane Trolley**

Employee #1 used a radio-controlled overhead bridge crane to raise a 7,280 lb coil of stainless steel. He apparently activated the wrong switch on the radio control, which caused the crane trolley to travel toward him. Employee #1 was struck by the suspended



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load and crushed him against a second coil of steel that was sitting on the floor. He was killed.

### **Accident 170683684 - Two Employees Injured in Fall When Scaffold Knocked Over**

Employees #1 and #2 were working on a scissor lift scaffold with the lift raised. The lift was in the path of a traveling bridge crane operated by a pendant control in the middle of the bay. As the operator, who was about 50 ft from the lift, moved a panel, the end of the crane trolley struck the railing on the lift and knocked the lift over. Employees #1 and #2 fell approximately 25 ft.

### **Accident 170812556 - Employee Crushes Thumb When Caught Between Sling and Load**

Employee #1, a warehouse worker for Castle Metals, was loading bundled metal into a van using an overhead crane with two 5-ton hoists. He was using pendant controls to move the elevated load west and then south into the van when the load started to swing. When Employee #1 grabbed the back chain either the load shifted or a kinked chain became unkinked, causing it to tighten about the load and his thumb, inflicting a crushing amputation injury.

### **Accident 170804330 - Employee Killed When Struck By Cast Ring**

Employee #1, a grinder at Columbia Steel Casting Company, Inc., Portland, OR, was rolling a cast ring over onto some metal saw horses. He hooked a foundry hook through the cast ring and the overhead crane lifted it. Employee #1 rotated the ring so it could be lowered onto the opposite side to be ground. When the cast ring made contact with the horses, the foundry hook became displaced. The cast ring began to fall and Employee #1 attempted to push it over. The cast ring fell on Employee #1, crushing his head and killing him.

### **Accident 170751176 - Electric Shock - Direct Contact With Energized Conductor**

A painter was painting from a 30-ton overhead crane (Model No. 30TON KDBET, Serial No. 4302). The overhead crane was designed with a platform from which employees could work while operating the crane. Although fall protection was needed while an employee was working from the crane platform, the employee was not wearing personal fall arrest equipment. He left the work platform and accessed the I-beam trolley track of another overhead crane. He reached over the track and contacted a 277-volt runway conductor for the crane. He received an electric shock, which knocked him off the structure. He fell 10 feet, 3 inches, struck his head on the corner of the crane's lifting hatch, and fell through the hatch 42 feet, 2 inches to the first floor. He died from his injuries. Investigation revealed that the employee had been trained in and provided with fall protection; however, he had been working without supervision. No worksite inspection had been conducted, and the employee had not been trained in electrical safety-related work practices related to working around crane runway conductors. (The company had a two-page, written safety program consisting of 19 work rules.) The

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employee had been provided with only 0.5 foot-candles of illumination while he was working from the crane and the track.

### **Accident 170804652 - Employee's Leg Injured When Struck By Chipper Head**

At approximately 9:15 a.m. on June 21, 1995, Employee #1 was using an overhead crane with a chain sling to move a 4 ft diameter chipper head (metal disk). He was positioning the chipper head onto the hub of a 10HC milling machine when the chain broke, causing the chipper head metal disk to fall and hit his leg. Employee #1 sustained a broken leg that required surgery.

### **Accident 014407233 - Electric Shock - Direct Contact With Energized Parts**

An employee (a fitter) was working from a self-propelled aerial platform, securing rails for an overhead crane. As he was welding and grinding steel bolts for a rail, he contacted one of the 480-volt runway conductors for the crane. The employee was electrocuted.

### **Accident 014228100 - Employee Killed in Unprotected Fall From Elevated Crane**

Employee #1 was removing and replacing trolley rails on an elevated overhead charge crane. While he was straddling the rails, attempting to remove rail clips with a sledgehammer, a trolley rail broke free and threw Employee #1 over the edge of the crane. He fell at least 50 ft to the metal flooring and died. Employee #1 was not wearing personal protective equipment, such as a safety harness and a lanyard.

### **Accident 170132914 - Employee Injured When Manlift Overturns**

Employee #1 was using a telescoping type manlift to install lighting in a glue-lamination plant. He was working approximately 18 ft high in the rafter area of the plant when the manlift was struck by the bridge of a pendant-operated overhead crane. The manlift tipped over and fell to the ground. Employee #1 sustained a large laceration and a fractured left arm during the fall.

### **Accident 014319941 - Employee Killed When Caught Between Scissor Lift Components**

Employee #1 was operating a scissor lift on which the safety latches had been broken off from the control levers. He leaned over the front of the lift platform, inadvertently contacting the control levers and raising the platform. His upper body was crushed between the lift railing and an overhead crane rail. Employee #1 died.

### **Accident 000700310 - Employee Is Knocked Off A Ladder By Crane**

Employee #1 was removing a track from a sliding door. While working from a ladder at a height of 18 feet, he was struck by the bridge of an overload crane and was knocked off the ladder.

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### **Accident 000688507 - Employee Struck and Killed By Flying Steel Bar**

Employee #1 was operating a pneumatic spinner attached to an overhead crane. Parts on an open rack were first dipped in a molten zinc bath, then craned to an enclosure, and then spun to remove excess zinc. Both the rack and the enclosure were open on top. A steel bar flew out of the rack and the enclosure and struck Employee #1, killing him.

### **Accident 170132724 - Employee Injured When Struck By Rigging**

Employee #1 removed his hard hat so he could wear the goggles required for using the cutting torch and proceeded to remove the footing of a raceway from the metal plate on the floor. He turned to a coworker and asked him to wiggle the raceway with the 3-ton overhead crane. Employee #1 stood up and stepped back as the coworker pushed the UP button to the overhead crane. The chain they were using to move the raceway broke, sending the rigging (block and hook) upward. When the rigging came down, it struck Employee #1 on top of the head. He fell backward and struck his head on the concrete floor. Coworkers came to his aid and contacted emergency help. Employee #1 was transported to Sacred Heart Hospital and admitted for a fracture to the skull.

### **Accident 170738827 - Welder Injured By Traversing Boom of Overhead Hoist**

At about 9:30 a.m. on June 11, 1994, Employee #1, of Alhambra Foundry Co., was welding one of the tracks of an overhead traveling hoist, capacity 10 tons, inside the foundry. He was on the twenty-second floor deck of the foundry shop, welding with only the facial screen of a hard hat. The hoist suddenly moved, passing through its track. Due to noise in the foundry, Employee #1 didn't know that the hoist was moving, and was struck on the left side of his head by a traversing boom. Suffering a head and ear laceration, Employee #1 was hospitalized. His supervisor was in his office when the accident occurred, but there were a few other coworkers on the ground floor of the foundry shop engaged in a hoisting operation. They were not aware of the welding work Employee #1 was doing.

### **Accident 170568190 - Employee Killed When Crushed Between Structure and Trailer**

At approximately 7:35 a.m. on May 24, 1994, Employee #1 was loading beans from an overhead elevator to the back trailer of a semi-truck. Employee #1 was using the window sill of the wall as a platform from which to see inside the trailer and open and close the chutes. After the trailer was loaded, he was found crushed between the trailer and the structural wall. Although the platform was approximately 64 in. from the ground, no fall protection was being used. Employee #1 was rescued by a customer and resuscitation was administered en route to a hospital, where Employee #1 died.

### **Accident 170710198 - Employee's Foot Crushed By Falling 1,000 Lb Load**

Employee #1, of a paper products company, was moving a roll of paper that weighed approximately 1,000 lb with an overhead stracker crane. The employee raised the roll to approximately 5 ft, then he proceeded to move the bridge. When he stopped, the load



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came off the crane and bounced onto his right foot, crushing it. A portion of his foot was amputated at the hospital.

### **Accident 170052427 - Employee Killed, Another Hurt, When Struck By Falling I-Beam**

On March 24, 1994, Employees #1 and #2 were using a 3 ton overhead crane to lift a 45 ft long modular building wall into place on the side of a frame. One of three lifting chains slipped, causing the attachment devices (brackets) at the other two lifting points to fail. The wall fell 4 ft to 5 ft to the concrete floor, missing the employees. The 40 ft long I-beam used to yoke the wall at three points was bounced free of the crane hook that held it, and fell, striking both employees. Employee #1 was dead at the scene from massive head and neck injuries. Employee #2 sustained head injuries and a broken foot.

### **Accident 014289532 - Employee Killed When Crushed Between Crane and Building**

While testing an emergency stop sensor, Employee #1 bent over and was caught between the moving frame of a 100-ton P & H crane and a support pillar of the building. Employee #1 sustained crushing injuries to his lower body and died.

### **Accident 000812396 - Crane Operator Killed When Struck By Shifting Load**

Employee #1, who had been on the job for 1 1/2 months, was operating a 15-ton capacity overhead top running bridge crane with a suspended load of 6 tons. The crane was operated by floor-operated pendant control devices. The load was a railroad switch panel 30 feet long by 12 feet wide. Employee #1 was operating the pendant control crane in a 4 1/2 ft wide aisle between a pile of railroad panels and a railroad gondola. There were tripping hazards on the floor (three steel rails, 4 to 5 gallon drums of loose components, and one chair sling). Employee #1 had lifted the panel from a flat position up to a 30 degree angle when the load shifted, striking and killing him.

### **Accident 170719330 - Worker's Finger Pinched By Falling Wire Bobbin**

At about 4:00 p.m. on December 14, 1993, Employee #1 was using a 1-ton overhead crane to place a 500-pound bobbin that contained aluminum wire into a machine that makes wire cable. The bobbin was hanging from two hooks situated on both sides of the bobbin's 3/4-inch rounded lip. To place the bobbin in the machine, Employee #1 had to align the two dog pins on the brake wheel with the two holes in the bobbin. To move the brake wheel, Employee #1 placed his left middle finger in an approximately 1 1/2-inch space between the bobbin and the brake wheel. The bobbin fell off the hooks and pinched his finger between it and the brake wheel. No tool was available to move the brake wheel so that Employee #1 could keep his fingers out of the danger zone.

### **Accident 170218044 - Employee Suffers Burns and Dies**

On November 20, 1993, Employee #1 lowered himself using an overhead crane and boatswain's chair into the confined space of the firm's foundry cupola that he was going to repair. Employee #1's clothes caught on fire from a unknown source and he later died

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from the burns. Allied Signal Brake, the employer, did not enforce, and Employee #1 did not follow, the firm's confined space entry procedure. Neither Employee #1 nor his employer tested the confined space, locked all hazardous energy sources, or had rescue equipment available.

### **Accident 000668434 - Employee Killed in Fall From Fixed Ladder on Crane**

Employee #1, who was estimating the removal of an outside overhead crane, climbed up on the crane's 32 ft fixed ladder to inspect the manner in which it was put together. He fell approximately 30 ft off the ladder and was killed.

### **Accident 000774406 - Employee Falls From Ladder and Dies**

Employee #1 was found at the base of a ladder. He had just finished operating an overhead crane and had fallen from the ladder. Employee #1 died.

### **Accident 170248868 - Two Employees Injured When Lift Is Knocked Over**

The employees work with wing skins and other very long airplane parts in an area called the forming corridor. The corridor has an automated overhead material handling device and is made up of two sides. One side is made up of fixed rails, much like I-beams, spaced at various intervals. Some rails are used for storage or holding parts, and others are in line with machines used to process the parts. The other side is an overhead crane, with a rail, that moves back and forth to line up with the fixed rails. The parts are attached to or hung from material handling movers or carriers that transfer the part from the crane onto a fixed rail, or from a fixed rail onto the crane, to be moved to another rail either to wait for the next step in the process, to be inspected, or to be placed into another machine. Employees #1 and #2 went up approximately 14 feet in a Grove scissor lift to attempt to move or jog a carrier which had hung up and was not moving the part into the machine as it was supposed to. The lift was perpendicular to the part being worked on. While they were trying to get the carrier to engage, another part was being moved onto the rail next to the one they were working on. When they noticed the part coming, Employee #2 tried to start the lift to get out of the way but could not. The part struck the side of the lift and continued on its path down the rail, pushing over the lift. Employees #1 and #2 were thrown to the concrete floor. Both workers were given emergency care, were back boarded with C-collars, and transported to Good Samaritan Hospital by District 9 medical units. Employee #1 was airlifted from Good Samaritan Hospital to Harbor View Trauma Center for emergency surgery on a broken right knee, femur, and trochanter (the ball that joins with the pelvic girdle). According to a nurse at Good Samaritan Hospital's emergency room, some of his bones were shattered and would require extensive surgery. Employee #2 was treated for bumps and bruises and released.

### **Accident 000602805 - Employee Killed When Crushed By 2 Coils of Steel**

At approximately 8:00 a.m. on June 21, 1993, Employee #1 was discovered, pinned, in a semi-upright position between two coils of rolled steel weighing 9,560 lb each. Employee #1 had been removing a third roll of coiled steel from the storage area by means of a

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Yale, 10-ton capacity, overhead crane. Employee #1 apparently bumped the two coils as he began to withdraw the third coil from the storage, causing the narrow based (7 in. wide each) coils to fall toward him as he operated the pendant controls. He was killed when he was struck on the head and the coils came to rest on his chest and upper torso.

### **Accident 170220834 - Employee Killed When Struck By Swinging Die**

On April 7, 1993, Employee #1, of GM Cadillac Division, was helping a coworker hook a die to be moved by a cab-operated overhead crane. After attaching the load, the operator raised the die. The crane was not centered over the die and the die swung and pinned Employee #1 between the die and a steel barrier. He died. A willful serious citation was issued.

### **Accident 014546071 - Employee in Work Basket Killed When Struck By Overhead Crane**

Employee #1 and a coworker were water blasting a CMX 30-ton overhead crane, serial #1572, positioned at a 40 ft height at the bridge rails. The two workers were descending the west side of the bridge in a Snorkelift 42, serial # 079148. Neither Employee #1 nor the coworker had placed safety locks on the main switch to the crane. The employer was in contact by radio with the crane operator and energized the crane runway. Employee #1 was struck by the service work platform on the northeast side of the crane. He was killed.

### **Accident 014388300 - Employee Killed When Hopper Falls From Crane Hook**

On January 21, 1993, Employee #1 was working in the mold prep area of a steel mill. He was positioning a hopper of sand, weighing approximately 3,000 lb, which was suspended from the hook of an overhead crane. The sand was to be dispensed into the top of a large mold. The bail of the hopper was suspended only from the point of the hook. When Employee #1 turned the hopper in order to bring the dispensing nozzle into position, the bail slipped off the hook. The hopper fell, struck the top of the mold, and tipped over onto Employee #1, pinning him against a large box of stored material. He was crushed on one side and died immediately. The bail of the hopper had previously remained point-loaded for at least 38 distinct moves of the crane hook. It did not come off until the hopper was rotated.

### **Accident 170220651 - Employee Killed When Pinned Against Steel Coil By Hook**

Employee #1, of Alkar Steel Corp., was operating a pendant-controlled overhead crane when the large C-hook attachment that he was using dislodged and pinned him against stored steel coils. Employee #1's chest was crushed and he was killed.

### **Accident 014314694 - Employee Crushed to Death Between Drive Shaft and Structure**

Employee #1 was changing light bulbs from an overhead crane. While he was moving the crane, his lanyard was pulled around the drive shaft, which pulled the employee between the drive shaft and the superstructure. Employee #1 was crushed to death.

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### **Accident 000956904 - Employee's Lower Leg Cut By Shard of Glass**

Employee #1, of Libbey Owens Ford, was moving a stoce of glass (130 in. by 130 in. by 3/4 in.) from a storage location with a bridge crane. Employee #1 was standing back and to the side with the pendant controls, and two coworkers were assisting by handling the slings. Employee #1 said that when the initial tension was taken up by the slings, a noise was heard. He glanced to the left side of the stoce at the same time a shard of glass fell and pinned his leg to an adjacent wooden upright. The shard of glass measured 7 ft 9 in. long by 26 in. wide at one end and was somewhat pointed at the other. No safety violations were cited. Personal protective equipment was worn.

### **Accident 000566182 - Employee Killed in Fall From Overhead Crane Rail**

Employee #1, the manager of Delta Steel, Inc., a structural steel warehouse, fell from a 24-foot high overhead crane rail on which he had been walking while installing computer communication cable. He apparently struck his face and head against the crane rail or another girder on the way down. Employee #1 was killed. No safety belt and lanyard, scissor lift, mobile rolling scaffold, or other means of fall protection and/or safe means of access was provided or used. In addition, Employee #1 had epileptic seizures for which he took medication. The drugs that are used to control such seizures can cause dizziness.

### **Accident 170067375 - Employee Injured When Struck By Ladle Handle**

On October 1, 1991, Employee #1 had been working in the melting department pouring area operating a 2 ton P & H overhead crane, serial #T27144. While sending the crane back with a 1,500 lb empty ladle that contained hot iron, the trip switch tripped back, causing the crane to go the wrong way because the shear pin sheared on the motor directional controller. Employee #1 was setting up his line and the ladle handle struck him in the abdomen and right rib, causing him to lose his balance and hurt his thumb. There was also an alignment problem with the spare and cast pouring cranes hitting the stationary directional trip lever at the top, near the pouring line station.

### **Accident 170335012 - Employee Killed When Struck By Falling Clamp**

Employee #1 was building a steel wall with steel plates supported by a 50 ton overhead crane and attached to a sling with a job-made C clamp. The clamp slipped, causing a plate to fall and crush and kill Employee #1.

### **Accident 014500904 - Employee Injured When Pinned Between Overhead Crane & Hopper**

At 7:20 a.m. on April 27, 1992, Employee #1, a millwright, was standing on a ladder inspecting a shot blast hopper for contents. A pendant-controlled overhead crane traveling south pinned Employee #1 between the lower portion of the crane's bridge and the hopper, 13 ft 10 in. off the floor. Clearance between the top of the hopper and the bridge was 5 7/16 in. The crane operator was not aware of Employee #1's position until the crane stopped. Employee #1 sustained injuries to his upper back and chest, and

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multiple facial fractures. Contributing factors were failure to communicate, allowing the crane to travel over an employee in close proximity, and failure to lockout the crane to prevent movement.

### **Accident 170220388 - Employee Killed When Struck By Crane**

On April 3, 1992, Employee #1 was gaining access to repair a disabled overhead crane when he was struck by another crane on the same runway. He died. A serious citation was issued.

### **Accident 014321749 - Employee Struck and Killed By Steel Mold**

While trying to remove scrap steel from a tap hole in the top of a mold, an overhead crane man caused the mold to slip partially off its buggy and to lean against a stool on a second buggy. This was not immediately corrected. The mold, now unstable, was leaning at an approximately 45-degree angle. Unknown to the crane operator, Employee #1, a mold man, climbed onto the buggy to dislodge the stuck piece of steel. As the crane man picked up a mold adjacent to the one that was leaning, the buggy shook. This caused the leaning mold to slide to a horizontal position and strike the employee in the chest, killing him.

### **Accident 000511360 - Employee's Finger Amputated After Caught By Crane and Load**

At or about 11:30 a.m. on December 6, 1991, Employee #1, of International Light Metals, was operating an overhead crane and a pendant control device to position a long piece of metal. He activated the wrong button, catching his finger between the jib and metal stock. The finger was later amputated. Employee #1 was transported to Torrance Memorial Hospital for treatment.

### **Accident 170192389 - Employee's Leg Broken When Struck By Falling I-Beam**

At approximately 1:45 p.m. on November 25, 1991, Employee #1, of Columbia Steel Inc., Rialto, CA, was operating a 5-ton overhead crane. He was unsecuring an I-beam when he accidentally pushed the wrong control button, causing the beam to move forward. It fell on Employee #1, who was hospitalized with a severely fractured left leg.

### **Accident 000937128 - Electric Shock and Fall - Direct Contact With Live Parts**

Two employees were dismantling a 1-ton overhead crane. They had removed several sections of crane rail on one side and were removing sections on the other side. The helper was on a 12-foot wooden stepladder trying to dislodge a rail when he felt a strong electric shock through the screwdriver he was holding. He climbed down and told the other employee that there was current running through the crane. The second employee disagreed and, instead of checking further, climbed the stepladder to perform the work. He contacted the energized rail and fell from the stepladder to the floor, sustaining multiple injuries. The employee was hospitalized for approximately 1 week before dying of his injuries.



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### Accident 000921734 - Employee Struck and Killed By Overhead Crane

Employee #1 was being trained for the first time in the paper machine area by the head mechanic. The employee would replace the mechanic when he went on vacation. Employee #1 and the mechanic were on top of the reel overhead crane doing repairs. The paper machine's overhead crane operator signaled to the mechanic that he needed to pass over the mechanic and the employee. The mechanic told Employee #1 to get down. They both bent down on the catwalk. As the first section of the overhead crane passed over them, the bottom of the crane knocked the wire cutter off the gear box. Employee #1 stood up to see what fell. The mechanic tried to tell him to get back down before the second section of the crane passed over; however, the employee was struck in the head and killed. This accident could have been prevented if the reel overhead crane had moved to a remote location so the paper machine's overhead crane would not have had to pass over the two employees.

### Accident 170183180 - Employee's Toes Crushed in Boots By Falling Beam

Employee #1, of Washington Iron Works, was working in a structural steel fabricating plant and was moving a steel I-beam to another area of the shop. The I-beam was sitting on the bottom flange in an upright position. Using an overhead bridge crane, Employee #1 placed a plate clamp/dog on the top flange of the beam and, operating the crane by pendant control, moved the beam toward the intended location. The beam bumped against another structural member, disengaging the plate clamp/dog from the beam. The beam fell to the floor, rolling over on Employee #1's right foot. Employee #1 was wearing steel toe safety shoes, which crushed his toes. The plate clamp/dog was not of the positive locking cam type, and relied on the weight of the load to secure the clamp.

### Accident 014418438 - Employee Killed When Pinned By Falling Sheet Metal

At approximately 8:45 a.m. on September 23, 1991, Employee #1 was preparing to place a 12 ft 6 in. by 12 ft 6 in. by 1/4 in. sheet of metal into a frame that was lying on the floor. To move the sheet, Employee #1 used a 10 ton overhead crane with a hook attached to the clamp that secured the metal sheet. As Employee #1 held the crane's control box, he landed the sheet, and with the help of a coworker, he positioned the sheet to lower it. In doing so, he let go of the control box and it swung to the center of the sheet. When the employee went under the load to retrieve the box, the clamp failed and the sheet metal fell and pinned him as he tried to escape. The employee's colon was severed and he suffered blood loss. He died later in the hospital.

### Accident 014445902 - Employee Dies in Fall From Crane Platform

During a shift change for overhead crane operators, Employee #1 fell 29 ft from the crane platform to the ground. He died.

### Accident 170192108 - Employee Injured When Struck By Load of Steel Beams

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At approximately 9:15 a.m. on August 13, 1991, Employee #1 was inside a railroad boxcar directing the loading of steel beams by an overhead bridge crane. While the steel beams were being lowered into the boxcar, Employee #1 noticed that the bush--the 4 in. by 4 in. wooden board used as a spacer--was out of place. He was trying to tell the crane operator to stop so that he could reposition the board when he was struck in the chest and shoulder by a load of beams and crushed him against the inner wall of the boxcar. Employee #1 spent 2 weeks at Loma Linda University Medical Center for treatment of his injuries. The load was freely suspended from two hooks and chains, and the operator could not immediately control it. Employee #1 had been trained by the crane operator and had worked for 2 days for this employer. The supervisor was not present at the time of the accident.

### **Accident 170220073 - Employee Dies After Being Crushed Between Dies**

On August 12, 1991, Employee #1, of the Ford Motor Co., was preparing to use an overhead crane to place a die in a press. He was controlling the crane with a radio control box. He had rigged the die properly, but apparently did not have the crane hook centered over the die. As he started the lift, the die moved sideways to center itself under the hook, and pinned Employee #1 between the die and another die behind him. He died 18 days after he was released from the hospital.

### **Accident 000597088 - Employee Killed in Fall From Top of Overhead Crane**

Employee #1, an electrical engineer, was working atop an overhead crane. The crane operator returned from break and started moving the crane. Employee #1 fell off the crane and struck his head on the floor. He suffered generalized trauma to the body and died. No lockout procedure was enforced.

### **Accident 170191290 - Employee Injured When Struck By Crane Bucket**

At 12:10 a.m. on April 12, 1991, Employee #1 was using hand tools to smooth concrete that had just been poured into a mold. Nearby, an overhead crane was being positioned over another mold. The crane operator later stated that the crane began to move by itself, and the pouring bucket struck Employee #1, pinning him against the mold on which he was working. He sustained injuries that required hospitalization.

### **Accident 014502108 - Employee Killed By Falling Suspended Load When Sling Breaks**

Employee #1 was to remove a telescoping cylinder from a Load Boss trailer (the type of trailer used for hauling/dumping dirt/landfill) for repair. The front of the trailer was raised approximately 6 ft off the chassis using a 3-ton overhead crane (Philadelphia Tramrail) with a pendant controlled hoist. The lifting sling, however, was a shop-made sling comprising a transport chain (3/8 in. links) with a hook attached at each end of the sling. While the front of the trailer was raised, a link broke, causing the trailer to collapse onto the chassis, then fall over onto Employee #1. He died. This accident occurred because: the sling was not rated, proof tested, or tagged; the defective sling was not inspected and

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removed from service; the employee was not working at a safe distance from the suspended load; and the stored energy of the suspended load was not blocked.

### **Accident 014514723 - Crane Operator Fell From Open Crane Cab Window**

Employee #1, a crane operator, was attempting to clean the the outside f one of the crane windows when he fell out the window and about 22 feet to the ground. He was killed.

### **Accident 000638072 - One Employee Killed, Other Injured By Falling Block and Hook**

Employee #1 was sitting on an I-beam that he was preparing to remove from structural steel framework located inside a co-generation plant under construction. The I-beam was at an elevation of 35 ft above floor level and was to be removed by an overhead crane. The crane's block and hook assembly two-blocked and fell, striking and killing Employee #1 and then striking Employee #2 who was working at floor level.

### **Accident 000776815 - Employee Struck By Falling Overhead Bridge Hoist**

Employee #1 was moving a 1,700 lb vault with a crane. The bridge with the hoist assembly came down and knocked Employee #1 to the floor. He did not require hospitalization.

### **Accident 000772624 - Employee Killed When Struck By Falling Crane**

Employee #1 and coworkers were using a 50-ton Grove mobile truck crane rigged with two choker slings to lower a 6,000 lb overhead rail crane. During the lowering operation the 2 in. by 12 ft nylon web slings broke. Employee #1 was crushed by the falling load and died of a fractured skull.

### **Accident 170163539 - Employee's Finger Lacerated Between Hook and Spreader Bar**

At approximately 7:20 p.m. on February 14, 1991, Employee #1 was helping to hook up an overhead crane to a spreader bar. His left little finger was lacerated when it became caught between the crane hook and the spreader bar eye.

### **Accident 014277263 - Employee Dies After Fall From Spreader Bar**

At approximately 10:15 a.m. on February 6, 1991, Employee #1 and a coworker were standing approximately 16 ft above the pavement on a spreader bar atop the grapple bucket of a container crane. They were replacing a radiator hose on a generator. They were not provided with fall protection. Employee #1 turned on the generator at the same time the grapple bucket began to open. This shook the spreader bar and Employee #1 fell to the pavement. The coworker was able to hold on to an overhead wire. Employee #1 was hospitalized for multiple injuries and died on March 2, 1991.

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### **Accident 014504732 - Employee Killed When Struck By Loose Crane Hook**

At approximately 8:15 am on January 29, 1990, employee #1 was working on a large steel panel weighing approximately 2,608 pounds and measuring 22 feet long and 6 feet wide. The panel was supported by an overhead crane chain and hook and was set on metal horses at an angle. The **hook slipped off** of the steel panel and struck employee #1 on the head, resulting in his death.

### **Accident 000514984 - Employee Killed in Fall to Lower Hold of Ship**

At approximately 5:45 p.m. on November 30, 1990, Employee #1, age 24, was working in the lower hold, tween ship, of a Korean marine vessel (Trust-38), stacking and moving rice bags. He was either hooked by, or he grabbed, a sling hook of a sling attached to a bucket of a Peco 9-ton overhead gantry crane. When the crane operator stopped the crane, Employee #1 fell approximately 55 to 60 feet to the plywood floor of the lower hold of the ship. He was killed.

### **Accident 014545743 - Employee Killed, Another Injured, By Overturning Forklift**

Employees #1 and #2 were rigging a large switch or tank. Employee #1 was operating an overhead 50/20 ton crane (DeShaza, pendant operated) and was standing behind a Caterpillar forklift that had lifted Employee #2 to the top of the 11 ft 2 1/2 in. high tank. Employee #2 was going to secure slings to the lifting lugs. The tank had been burned through all the way around, 4 ft from the base or floor with an acetylene torch. As Employee #1 brought the crane over the tank, one leg of the sling caught on a lifting lug and overturned the tank, which overturned the forklift. The forklift struck and killed Employee #1. Employee #2 jumped to the concrete floor and landed on his hip. He was hospitalized.

### **Accident 170190284 - Two Employees Injured When Struck By Metal H-Column**

At approximately 5:40 p.m. on October 24, 1990, Employee #1 was using a 5-ton overhead bridge crane to lift a 28 ft long metal H-column. He intended to stack the column in a storage area west of the shop. Employee #1 had to raise the column to waist level to clear some structures before moving it. When he pushed the switch, the column moved toward him and pinned him on his back. He sustained injuries that required hospitalization. Employee #2 tried to free him by pushing on the column. It swayed back at him, striking and injuring his arm.

### **Accident 000972489 - Employee Hospitalized When Steel Door Falls on Him**

Employee #1, a shop helper in a specialty steel fabrication shop, was using a 10 ton overhead crane to lift a 1,500 lb steel door from a horizontal to a vertical position. The hook of the chain sling was placed in the lifting eye on the top of the door, which was approximately 6 ft by 6 ft by 1 ft thick with a brick lining. When the door was set down in the vertical position for maintenance, the crane was lowered too far. The chain sling became slack; the chain sling hook detached from the lifting eye; and the steel door fell on Employee #1. He was trapped under the door until coworkers lifted the door off him

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with the overhead crane. Employee #1 suffered multiple fractures of the wrist, arm, elbow, and ribs. He had been trained in a safe lifting practice for using a chain sling to lift the steel doors, but was not following that practice.

### **Accident 170228845 - Employee Killed When Crushed By Steel Bundle**

On October 2, 1990, Employee #1, of Hercules Drawn Steel, was operating a Shepard Niles 5 ton overhead crane with a radio controlled control box. He had to move four bundles of steel to get to the bundles that needed to be loaded onto the truck. He placed two 4-inch wide synthetic web slings under the four bundles of steel in the storage rack to move them. As he was lifting the steel, the load shifted, allowing one end of the steel bundle to slip out of the sling. One of the lower bundles of steel fell onto the aisle and landed on top of Employee #1's head and shoulders. He sustained severe crushing injuries and died. The employer was issued serious citations for the violation of eight rules.

### **Accident 000763177 - Employee Crushed and Killed Between Crane and Aerial Lift**

Employee #1 was working on an overhead crane when the crane's spider was struck by the top of a coil being transported at ground level by an automated, guided vehicle. This impact caused the crane to move toward Employee #1, who became crushed between an access platform on the crane and the personnel lift that he had used to reach the crane. He was killed.

### **Accident 000515064 - Employee Killed When Overhead Crane Falls**

Employee #1 was operating a 10-ton P & H overhead crane when a wind-rain storm caused the crane to accelerate toward the end of the rail runway. The crane hit the rail stops at the south end of the elevated runway with enough force to shear the track on one side. The crane continued toward the end of the runway and fell to the ground. The other end of the crane, with operator cab attached, and Employee #1 inside, was then pulled off its track and fell to the ground. Employee #1 was crushed and killed when the crane bridge fell on his cab. The crane spanned 110 ft between runways and was operated at an elevation of 40 ft. The runway is 460 ft long. The crane with bridge and hoisting equipment weighed 98,000 lb.

### **Accident 014500466 - Employee Struck and Killed By Falling I-Beam**

At approximately 10:20 a.m. on July 19, 1990, Employee #1 was using an overhead crane to unload four I-beams from an open flatbed trailer. The trailer, which was 4 ft 6 in. high by 7 ft 7 in. wide by 41 ft 7 in. long, was parked inside building 74 with the front facing north. The two outside beams were 36 in. by 12 1/4 in. and 47 ft long, standing on the narrow dimension. At 160 lb/foot WF, they each weighed 7,520 lb. The other two beams were 12 1/2 by 12 1/2 and 40 ft 9 in. long. At 109 lb WF, they weighed 4,442 lb each. The east side at the trailer was clear and there were 3 ft high welds along and within 2 1/2 to 4 ft of the west side. While raising, blocking, and hitching alone with a pendant control, Employee #1 entered the space along the west side of the trailer and displaced



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the west beam, which rolled off the truck and onto him. There were no witnesses. There was no equipment failure involved.

### **Accident 000894865 - Electric Shock - Direct Contact With Energized Conductor**

An employee was moving a 22.7-metric-ton overhead crane (Serial No. 84-139) from the west end to the east end of a plant for a concrete pour. Before he moved the crane, the employee noticed that the load block and hook and a four-leg chain sling, which was about 1.5 meters long, was suspended about 4.9 meters above the floor and positioned to the far south of the building. While the employee was traveling with the crane, three of the four legs of the sling contacted a 150-millimeter I-beam that was being used to support a second metal I-beam, which was about 18.3 meters long and 4.9 meters above the floor. The second beam supported a 0.9-metric-ton hoist. The same beam also supported three 120-volt runway conductors, which supplied power to the hoist. The sling contacted a support bracket, and the hooks on three of the four sling legs became wedged against the bracket. The employee was able to free two of the three hooks by raising and lowering the load block. He then climbed up a structural steel chain to unhook the third hook and apparently contacted the runway conductors. He was electrocuted.

### **Accident 014243711 - Employee Killed When Crushed in Wire Ropes of Overhead Crane**

Employee #1 was approximately 90 ft above the floor atop the cab of a #270 Lukens overhead crane. He was changing a wire rope when he was drawn into the crane's wire ropes, and was crushed and killed.

### **Accident 000964718 - Employee Killed in Fall From Overhead Crane**

At approximately 1:25 p.m. on May 16, 1990, Employee #1, a maintenance man/mechanic at Washington Stair and Iron Works, Inc., was repairing the clutch drive of the truck of a Tramrail 5-ton overhead bridge crane. He was working on the overhead crane's railway, approximately 22 ft 7 in. above the concrete floor at the east end of the main shop. He had been working for approximately 45 to 55 minutes when he fell to the concrete floor and was killed. Employee #1 was not using fall protection, nor had the employer supplied any.

### **Accident 170228654 - Employee Killed in Fall From Roof**

Employee #1 and a coworker, of MMC Saginaw Detroit Forge Plant, were assigned to repair wiring on an overhead crane. For easier access, they had the operator park the crane over the roof of a building. A portable ladder accessed the roof and a portable platform on the roof accessed the crane. Employee #1 climbed the ladder to the roof, walked along the edge of the roof to the portable platform, and fell about 15 ft off the roof, striking the floor. He died three days later from his injuries. Three citations were issued for two serious and one other-than-serious violations of 447(1) and 1855(2), sec. 11(a).

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### **Accident 014295182 - Employee Injured When Roof Panel Falls From Crane**

At about 6:00 a.m. on March 9, 1989, Employee #1 and a coworker were removing an approximately 2,500 lb roof panel from an HVAC unit using a 10 ton overhead traveling crane and two sling chains. Employee #1 had lifted the 5 to 6 ft high roof off the unit with the crane and was lowering it over the side of the building for repairs. As the roof was being lowered, the far edge caught on a coil pipe that stuck out 5 in. from the side wall. The roof bounced, causing the safety latch on the crane hook to fail. The chain came loose and the roof fell, striking Employee #1 on the side of his face and on his left hand, and fracturing his left hip and leg. He was wearing a hard hat. He was hospitalized for his injuries.

### **Accident 014546477 - Electric Shock - Direct Contact With Runway Conductor**

An employee was servicing a 10-ton whiting overhead pendant-operated crane (no. S.11581). The employee was on the crane runway, 17 feet above the floor. The 480-volt runway conductors, which were not de-energized or locked out, were 33.75 inches above the crane rails. The employee contacted the conductors and was electrocuted.

### **Accident 000971176 - Employee's Neck Broken When Struck By Falling Block**

Employee #1 was working inside a large concrete pipe mold setting up the core. The core was put in place by an overhead bridge crane. The employee had unhooked the core from the slings and the crane operator, operating from a cab, had moved the cab over the mold to make sure it was straight. The operator was moving the cab back toward the wall and raising the block out of the mold at the same time. He accidentally raised the block all the way up. The upper limit switch failed to work; it two-blocked and broke the wire rope, dropping a more than 300 lb block back down inside the mold. It struck Employee #1, breaking his neck. He was hospitalized.

### **Accident 000970913 - Employee's Legs Crushed By 26,000 Lb Sheet Steel Load**

Employee #1 was attempting to load 14 pieces of 6 ft by 30 ft by 1/4 in. sheet steel onto an awaiting truck. Inadequate/improper lifting equipment, methods, and procedures resulted in the 26,000 lb load being dropped and landing partially on both legs of Employee #1, who was operating the pendant controls of the bridge crane. Employee #1 required hospitalization.

### **Accident 000670745 - Employee Dies After Struck By Falling Load**

At approximately 9:00 a.m. on September 21, 1988, Employee #1 was moving a bundle of aluminum with a 2 ton overhead bridge crane. The employee had attached the load block from this crane to the bundle with four hooks suspended by chains to the steel banding that was around each end of the bundle. Employee #1 had the load elevated over 6 ft high when the load apparently shifted and one of the bands broke on the end next to the employee. Employee #1 was knocked to the floor. The aluminum in this bundle weighed 990 lb and was 179 in. long. The bundle landed on Employee #1's body, leaving just his head exposed. Employee #1 died of a fractured skull at the hospital 2 hours later.

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### **Accident 014570618 - Employee Dies of Burns When Molten Iron Spills and Ignites**

On July 13, 1988, a 30-ton ladle containing 50,000 lb of molten iron snapped and spilled an unknown quantity of iron onto the floor at the south end of a 20 ft pit in an iron foundry. A flash fire was immediately created by the combustion of the molten iron and foundry dust. The flames reached above the Alliance overhead cab crane that had been used to pour the iron. Employee #1 was engulfed in flames and died of burns to 95% of his body. Two coworkers, a utility man and a craneman, were both burned in the accident. The spill occurred during the pour of Roll K-7573, size 53 in. by 51 in., for U.S. Steel. No human error was determined.

### **Accident 014469183 - Employee Killed When Struck on Head By Falling Motor**

An overhead bridge pendant-controlled crane was under repair at the corner of a fabrication shop. The pendant control had been placed behind a vertical wooden ladder that provided access to the crane maintenance platform. A small 25 to 30 lb crane end truck motor had been removed from its truck end for bearing repair and placed on a maintenance platform attached to the fabrication shop wall. The electrical flexible cord remained hooked to the crane. While the crane was unattended, Employee #1, a shop laborer, removed the pendant from behind the ladder and engaged the bridge drive. As the crane moved forward, the cord attached to the bridge pulled the motor from the platform. The motor fell approximately 20 feet, striking Employee #1 on the head and killing him.

### **Accident 014382972 - Employee Killed When Struck By Falling Racks of Steel Angles**

Two overhead pendant control cranes were being used to remove steel angles from a rack and full racks of angles from the same rack system. There was no coordination of efforts between the two cranes. One crane was positioned at the side of the rack system trying to remove angles from the third rack. At the same time, the other crane was attempting to remove the fourth and fifth rack, the top two racks, from the same rack system. The crane trying to remove the angles from the third rack lifted 4 or 5 angles several inches until the hook slipped. Employee #1, the other crane operator, was standing in front of the rack system, attempting to connect the rack lifter to the fifth rack. The third, fourth, and fifth racks suddenly fell over, landing on Employee #1 and killing him.

### **Accident 014397053 - Employee Killed When Crushed Between 2 Steel Beams**

Several employees were moving steel beams from one skid to another. An overhead crane, being operated from the floor, was used to lift the beams. Employee #1 disconnected the chain from the 3,088 pound steel beam and moved between two beams to guide the chain and hook. The hook caught on a flange on the beam, causing it to lean on its side and then flip over. Employee #1 was pinned between the two beams and crushed to death.