ENGINEERED FOR EXPLOSIVE ATMOSPHERES

For over 100 years, Shaw-Box cranes and hoists have set industry standards for performance and durability. Using state-of-the-art technology, they have met the most rigorous industry demands. The same commitment to excellence that made Shaw-Box an industry leader is evident in our materials handling equipment for critical applications in hazardous environments.

All Shaw-Box products are designed and built to rigid design and manufacturing standards. Our crane components and hoists meet or exceed the requirements of article 500 of the National Electrical Code. Shaw-Box also produces hoists and crane components in a wide range of capacities and lifts for duty in more demanding conditions. These components are specially designed to work safely and efficiently in the most hazardous environments.

Only the finest parts and materials are used to provide the maximum in safety, quality, and ease of maintenance. Explosive environments are safer with Shaw-Box explosion proof motors, brakes, and electrical components, including frittings, seals, enclosures, and limit switches. Shaw-Box also makes intrinsically safe electrical components which operate at voltages too low to cause ignition. Shaw-Box provides the industry’s finest spark-resistant components, including stainless steel wire rope, solid manganese bronze or stamped beryllium copper wheels, durzone bronze hooks and lower block bodies constructed entirely from solid bronze plate.

Shaw-Box explosion proof and spark resistant hoists and crane components have been industry tested and proven in hazardous environments around the world. They are designed to meet the requirements for these applications as defined by the National Electrical Code for: Class I, Groups C & D, Division 1 and 2 and Class II, Groups E, F & G, Division 1 and 2 environments.

EXPLOSION PROOF ELECTRICAL COMPONENTS

Nema 799 Control Enclosures
Nema control enclosures are designed to reduce or eliminate the risk of explosion in hazardous environments. Nema 7 enclosures prevent igniters of gas external to the enclosure by containing the explosion within the panel. Nema 9 enclosures are sealed to prevent an explosion by excluding the entry of explosive amounts of hazardous dust.

Explosion Proof Or Dust Ignition Proof Motors
Explosion proof motors and governors perform in the same way as Nema 7 sealed enclosures, preventing the ignition of external gas by containing the explosion within the motor and brake. Dust ignition proof motor prevents ignition of the dust in the atmosphere, which has built up on the motor and brake, by opening a compensating hole in the motor of the hazardous material. Dust ignition proof motors are sold for use in Class 2, Group F, Division 1 applications.

Explosion Proof Limit Switch Enclosures
Unprotected limit switches can also face an explosion risk in hazardous environments. Explosion proof and dust ignition proof gearless or block type limit switches are provided for Nema 7 and 9 equipment. Illustrated is a Nema 7 rated limit switch enclosure.

Nema 799 Pendant Stations
Nema 799 pendant stations are standard control stations for explosion proof enclosures to prevent ignition of explosive materials inside the pendant station. The enclosure prevents ignitable dust from entering in, and contains any explosion.

Intrinsically Safe Controls & Products
Intrinsically safe systems range a motor controls with electrical components operating at voltages too low to cause ignition of gases or dust. While the motors are controlled, the pendant station can be used for lighter, standard enclosure (or heavier) reducing operating fatigue and permitting easier operation of the equipment.

SPARK RESISTANT MECHANICAL COMPONENTS

Stainless Steel Wire Ropes
For hazardous applications that require spark resistant features, the hoists are made with stainless wire rope instead of the standard plain steel. Stainless steel wire reduces the possibility of sparking when making contact with the rope drum, sheaves, or external objects with which it may come in contact with.

Bronze Hooks & Leather Blocks
Solid, cast bronze hooks reduce the possibility of sparking when in contact with steel rails, bridge or monoray hooks, or drive pinions. They also lower the possibility of igniting the hazardous atmosphere. Illustrated are blocks for under-running monoray hoists.

Bronze Trolley Wheels
Trolley wheels manufactured from manganese bronze reduce the possibility of sparking when in contact with steel rails, bridge or monoray hooks, or drive pinions. They also lower the possibility of igniting the hazardous atmosphere. Illustrated are wheels for under-running monoray hoists.

Bronze Bridge Wheels
Taper or under-running bridge crane wheels are manufactured from manganese bronze for spark resistant requirements. Bronze wheels contacting a steel rail, necessary hooks or drive pinions reduces the possibility of hazardous sparks. Illustrated are wheels and pinions for under-running bridge cranes.

Air Operated Hoists
Air operated hoists are ideal for hazardous environments. Air power eliminates electrical motors and controls and the sparking and arcing associated with them. They have air operated inherent, provides variable speed control for precise hoisting. Illustrated is a 10-ton, air-actuated electric motor driven 700 watt hoist.