Self Erect Cranes

Used Self Erect Cranes Louisiana - The base of the tower crane is generally bolted to a large concrete pad that provides very necessary support. The base is attached to a mast or a tower and stabilizes the crane which is affixed to the inside of the building's structure. Often, this attachment point is to an elevator shaft or to a concrete lift. The mast of the crane is often a triangulated lattice structure that measures 10 feet square or 0.9m2. Connected to the very top of the mast is the slewing unit. The slewing unit is made of a gear and a motor which enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of eighty meters or 265 feet. The maximum lifting capacity of a tower crane is 16,642 kilograms or thirty nine thousand six hundred ninety pounds with counter weights of 20 tons. Furthermore, two limit switches are utilized in order to ensure the operator does not overload the crane. There is also another safety feature called a load moment switch to make certain that the operator does not exceed the ton meter load rating. Finally, the maximum reach of a tower crane is 70 meters or 230 feet. Due to their extreme heights, there is a science involved to erecting a crane. The stationary structure will at first have to be transported to the construction site by utilizing a large tractor-trailer rig setup. Next, a mobile crane is utilized so as to assemble the machinery portion of the crane and the jib. Afterwards, these parts are attached to the mast. Afterward, the mobile crane adds counterweights. Forklifts and crawler cranes could be a few of the other industrial machines which is typically used to erect a crane. As the building is erected, mast extensions are added to the crane. This is how the crane's height could match the building's height. The crane crew uses what is called a climbing frame or a top climber which fits between the top of the mast and the slewing unit. A weight is hung on the jib by the work crew so as to balance the counterweight. Once complete, the slewing unit could detach from the top of the mast. In the top climber, hydraulic rams are utilized to adjust the slewing unit up an additional 6.1m or 20 feet. After that, the crane operator uses the crane to insert and bolt into position one more mast part piece.