Self Erect Cranes

Used Self Erect Cranes Oxnard - Generally the base which is bolted into a large concrete pad provides the essential support for a tower crane. The base is connected to a mast or a tower and stabilizes the crane which is connected to the inside of the building's structure. Usually, this attachment point is to an elevator shaft or to a concrete lift. Usually, the mast is a triangulated lattice structure measuring 0.9m2 or 10 feet square. The slewing unit is attached to the very top of the mast. The slewing unit consists of a gear and a motor that enable the crane to rotate. Tower cranes are able to have a maximum unsupported height of 80m or 265 feet. The tower crane's maximum lifting capacity is 16,642 kilograms or thirty nine thousand six hundred ninety lbs. with counter weights of twenty tons. Additionally, two limit switches are utilized in order to ensure the operator does not overload the crane. There is also one more safety feature called a load moment switch to make sure that the operator does not surpass the ton meter load rating. Lastly, the maximum reach of a tower crane is 230 feet or 70 meters. Because of their extreme heights, there is a science involved to erecting a crane. The stationary structure would first have to be brought to the construction site by using a huge tractor-trailer rig setup. Next, a mobile crane is used so as to assemble the machine part of the jib and the crane. These parts are then connected to the mast. Then, the mobile crane adds counterweights. Forklifts and crawler cranes may be a few of the other industrial machines which is utilized to erect a crane. As the building is erected, mast extensions are added to the crane. This is how the crane's height is able to match the building's height. The crane crew uses what is called a climbing frame or a top climber that fits between the slewing unit and the top of the mast. A weight is hung on the jib by the work crew so as to balance the counterweight. Once complete, the slewing unit is able to detach from the top of the mast. In the top climber, hydraulic rams are used to adjust the slewing unit up an extra 20 feet or 6.1m. Next, the crane operator utilizes the crane to insert and bolt into position one more mast part piece.